



STIC Search Report

Biotech-Chem Library

STIC Database Tracking Number: 95784

TO: Ganapathy Krishnan
Location: 8d08 / 8b19
Thursday, June 05, 2003
Art Unit: 1623
Phone: 305-4837
Serial Number: 10 / 009805

From: Jan Delaval
Location: Biotech-Chem Library
CM1-1E07
Phone: 308-4498

jan.delaval@uspto.gov

Search Notes

Jan Delaval
Reference Librarian
Biotechnology & Chemical Library
CM1 1E07 - 703-308-4498
jan.delaval@uspto.gov

=> fil reg

FILE 'REGISTRY' ENTERED AT 11:13:35 ON 05 JUN 2003

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 4 JUN 2003 HIGHEST RN 525536-93-0

DICTIONARY FILE UPDATES: 4 JUN 2003 HIGHEST RN 525536-93-0

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when conducting SmartSELECT searches.

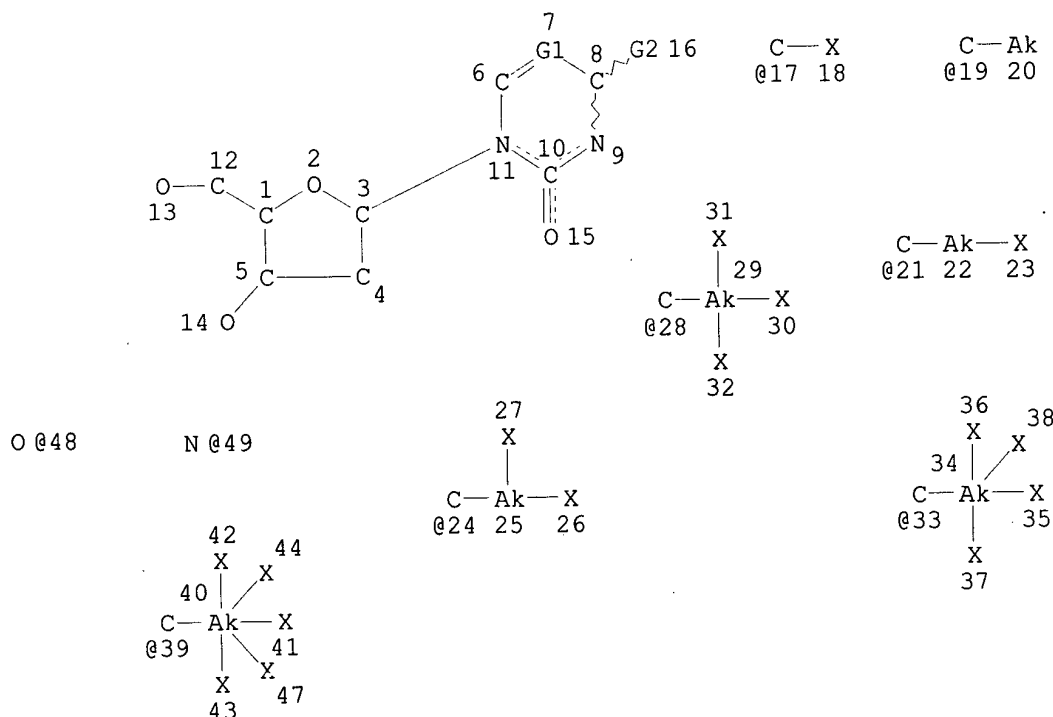
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:

<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> d sta que 129

L5 STR



VAR G1=C/17/19/21/24/28/33/39

VAR G2=48/49

NODE ATTRIBUTES:

NSPEC	IS	RC	AT	49
CONNECT	IS	M1	RC	AT 4
CONNECT	IS	M1	RC	AT 13
CONNECT	IS	M1	RC	AT 14
CONNECT	IS	M1	RC	AT 40
CONNECT	IS	M1	RC	AT 49

Jan Delaval
Reference Librarian
Biotechnology & Chemical Library
CM1 1E07 - 703-308-4498
jan.delaval@uspto.gov

DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

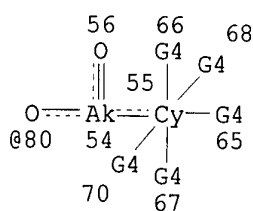
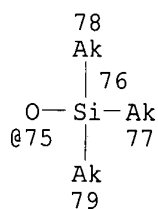
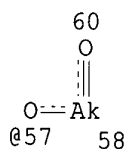
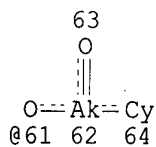
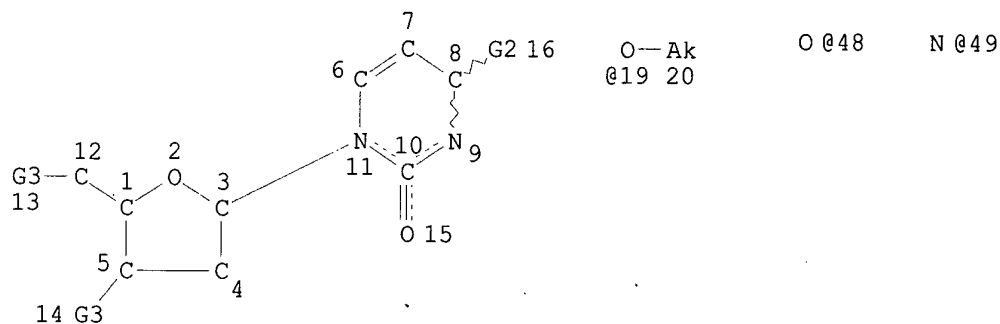
RSPEC 4 11

NUMBER OF NODES IS 47

STEREO ATTRIBUTES: NONE

L7 69658 SEA FILE=REGISTRY CSS FUL L5

L14 STR



VAR G2=48/49

VAR G3=OH/57/61/80/75

VAR G4=H/AK/X/19

NODE ATTRIBUTES:

NSPEC IS RC AT 49

CONNECT IS M1 RC AT 4

CONNECT IS M1 RC AT 7

CONNECT IS M1 RC AT 49

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

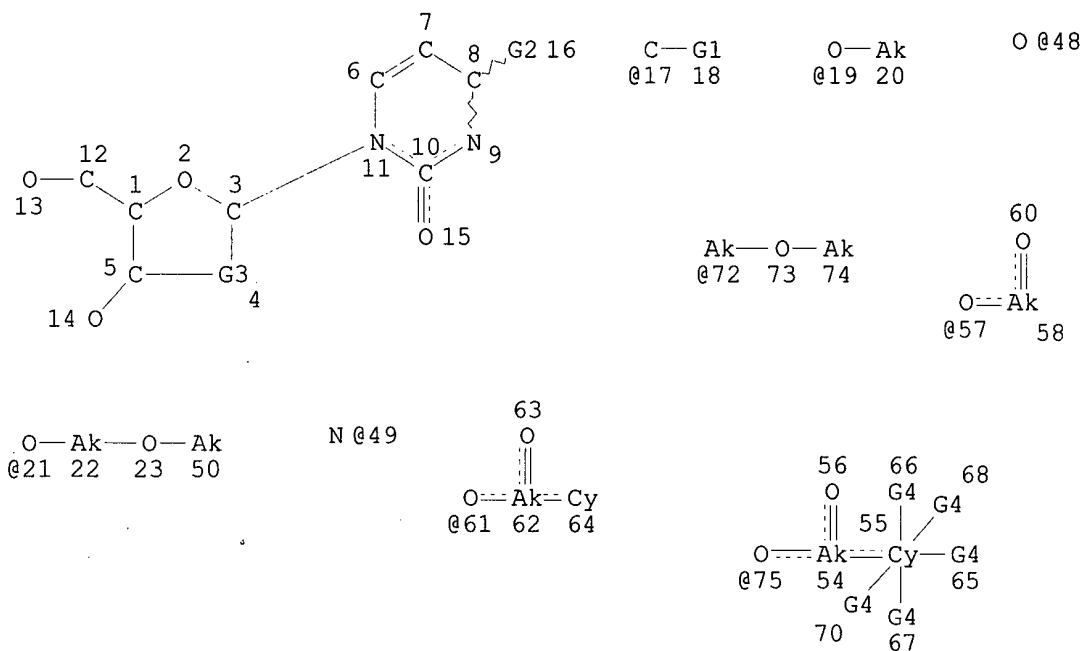
GRAPH ATTRIBUTES:

RSPEC 4 11

NUMBER OF NODES IS 41

STEREO ATTRIBUTES: NONE

L17 STR



VAR G1=X/OH/AK/CN/19/21/72/57/61/75

VAR G2=48/49

VAR G3=C/17

VAR G4=H/AK/X/19

NODE ATTRIBUTES:

NSPEC IS RC AT 49

CONNECT IS M1 RC AT 7

CONNECT IS M1 RC AT 13

CONNECT IS M1 RC AT 14

CONNECT IS M1 RC AT 49

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC 4 11

NUMBER OF NODES IS 45

STEREO ATTRIBUTES: NONE

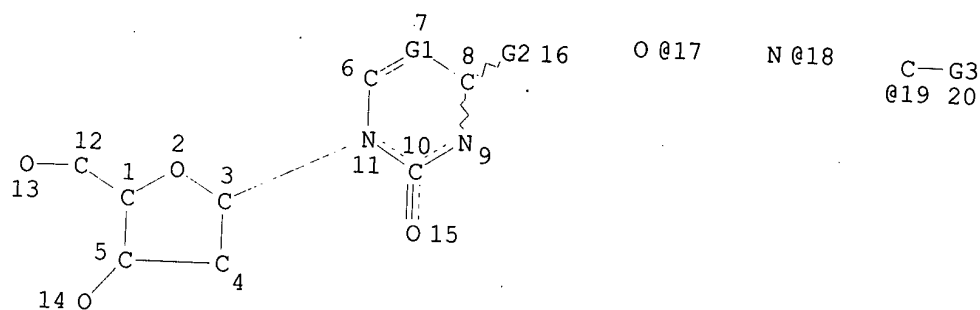
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L19 63849 SEA FILE=REGISTRY ABB=ON PLU=ON L18/COM

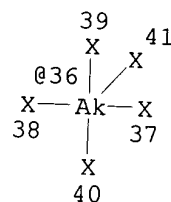
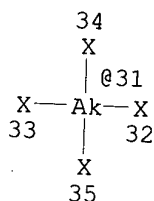
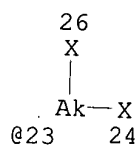
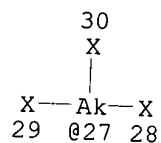
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L21 5421 SEA FILE=REGISTRY ABB=ON PLU=ON L20/COM

L22 STR



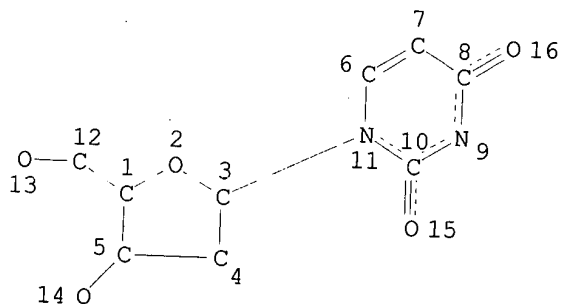
Ak-X
@21 22



VAR G1=C/19
VAR G2=17/18
VAR G3=X/AK/21/23/27/31/36
NODE ATTRIBUTES:
NSPEC IS RC AT 18
CONNECT IS M1 RC AT 4
CONNECT IS M1 RC AT 13
CONNECT IS M1 RC AT 14
CONNECT IS M1 RC AT 18
CONNECT IS M1 RC AT 36
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC 4 11
NUMBER OF NODES IS 40

STEREO ATTRIBUTES: NONE
L23 5421 SEA FILE=REGISTRY SUB=L21 CSS FUL L22
L24 STR



NODE ATTRIBUTES:
CONNECT IS M1 RC AT 4
CONNECT IS M1 RC AT 7
CONNECT IS M1 RC AT 13
CONNECT IS M1 RC AT 14

DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC 4 11

NUMBER OF NODES IS 16

STEREO ATTRIBUTES: NONE

L27 SCR 2039 OR 2048 OR 2043 OR 2054 OR 2041 OR 2053

L29 2036 SEA FILE=REGISTRY SUB=L23 CSS FUL L24 NOT L27

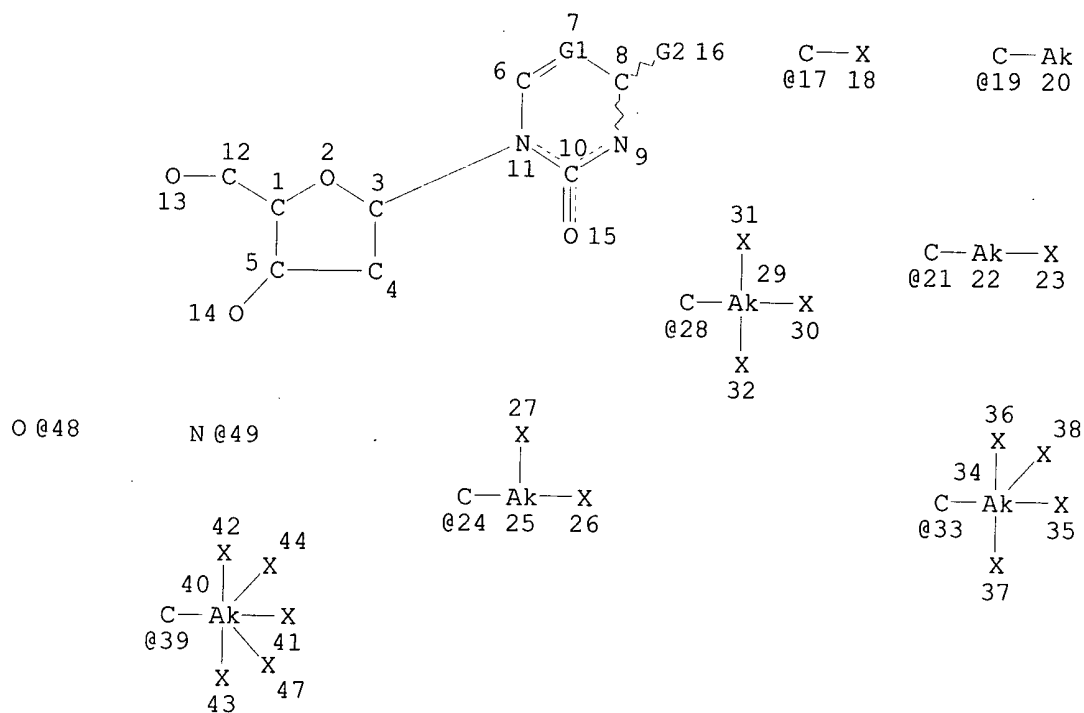
100.0% PROCESSED 2046 ITERATIONS

2036 ANSWERS

SEARCH TIME: 00.00.01

=> d sta que 141

L5 STR



VAR G1=C/17/19/21/24/28/33/39

VAR G2=48/49

NODE ATTRIBUTES:

NSPEC IS RC AT 49

CONNECT IS M1 RC AT 4

CONNECT IS M1 RC AT 13

CONNECT IS M1 RC AT 14

CONNECT IS M1 RC AT 40

CONNECT IS M1 RC AT 49

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

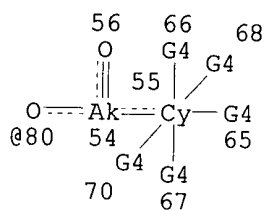
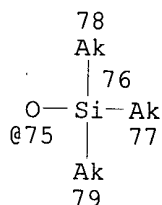
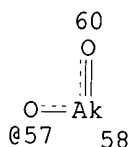
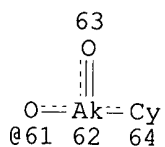
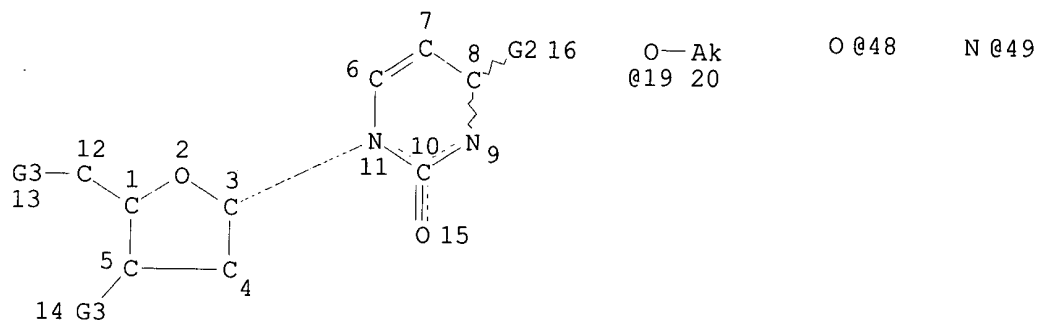
GRAPH ATTRIBUTES:

RSPEC 4 11

NUMBER OF NODES IS 47

STEREO ATTRIBUTES: NONE

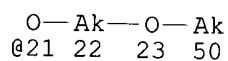
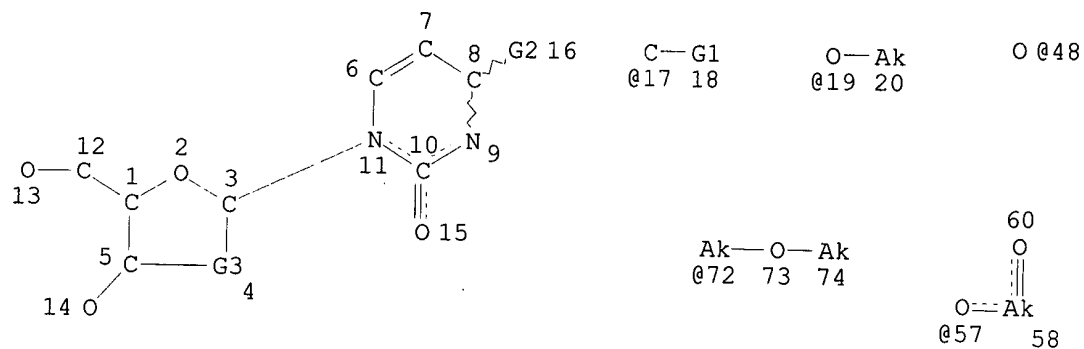
L7 69658 SEA FILE=REGISTRY CSS FUL L5
L14 STR



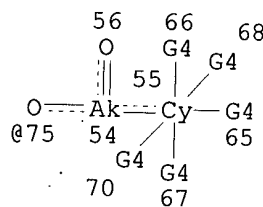
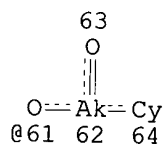
VAR G2=48/49
VAR G3=OH/57/61/80/75
VAR G4=H/AK/X/19
NODE ATTRIBUTES:
NSPEC IS RC AT 49
CONNECT IS M1 RC AT 4
CONNECT IS M1 RC AT 7
CONNECT IS M1 RC AT 49
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC 4 11
NUMBER OF NODES IS 41

STEREO ATTRIBUTES: NONE
L17 STR



N @49



VAR G1=X/OH/AK/CN/19/21/72/57/61/75

VAR G2=48/49

VAR G3=C/17

VAR G4=H/AK/X/19

NODE ATTRIBUTES:

NSPEC IS RC AT 49

CONNECT IS M1 RC AT 7

CONNECT IS M1 RC AT 13

CONNECT IS M1 RC AT 14

CONNECT IS M1 RC AT 49

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

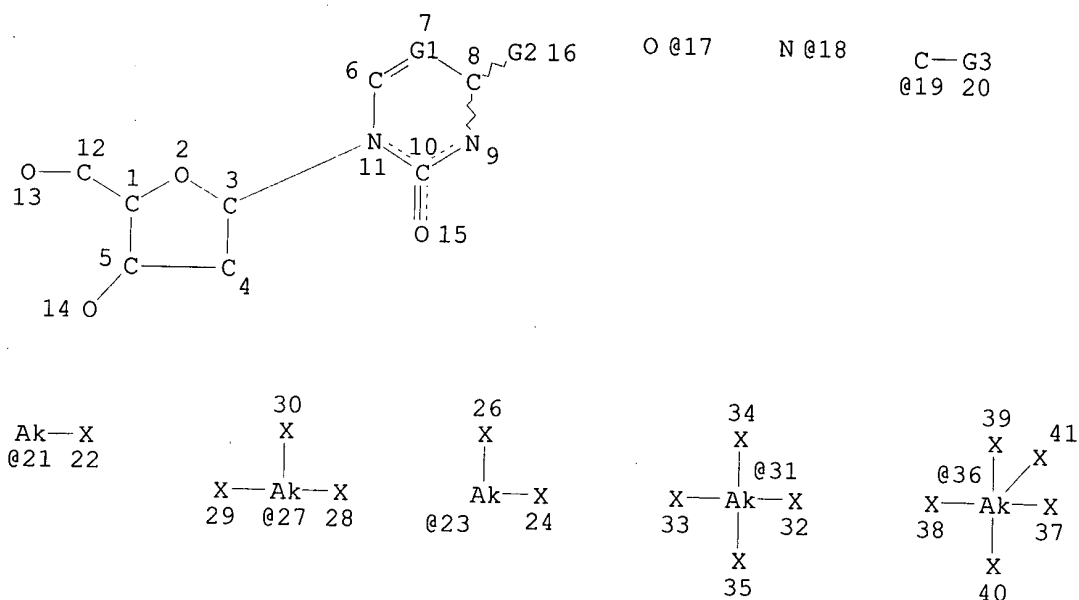
GRAPH ATTRIBUTES:

RSPEC 4 11

NUMBER OF NODES IS 45

STEREO ATTRIBUTES: NONE

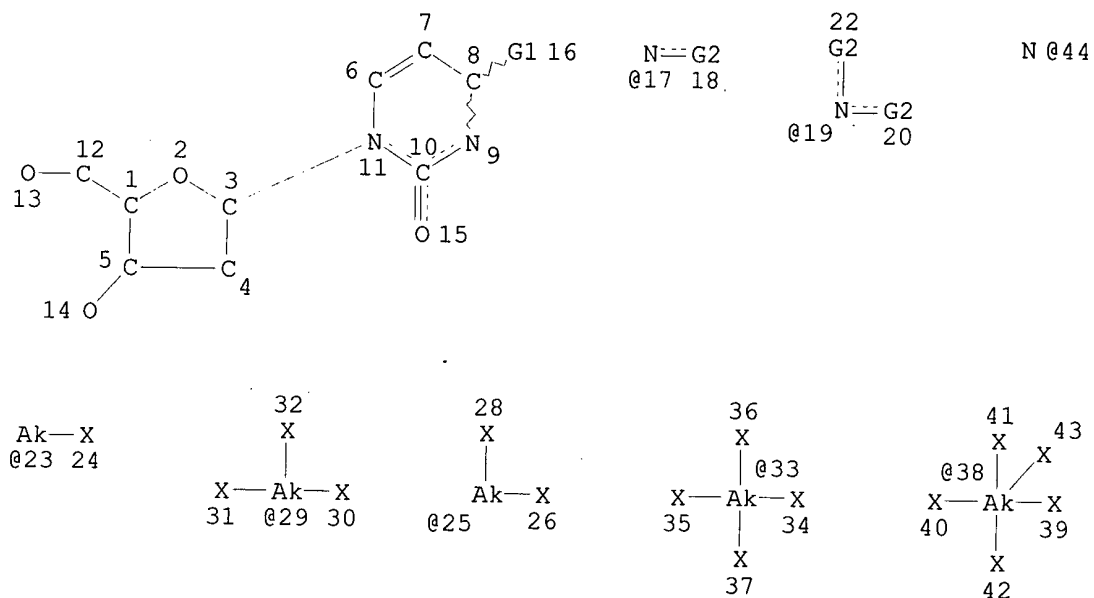
L18 63853 SEA FILE=REGISTRY SUB=L7 CSS FUL L17
L19 63849 SEA FILE=REGISTRY ABB=ON PLU=ON L18/COM
L20 5426 SEA FILE=REGISTRY SUB=L19 CSS FUL L14
L21 5421 SEA FILE=REGISTRY ABB=ON PLU=ON L20/COM
L22 STR



VAR G1=C/19
 VAR G2=17/18
 VAR G3=X/AK/21/23/27/31/36
 NODE ATTRIBUTES:
 NSPEC IS RC AT 18
 CONNECT IS M1 RC AT 4
 CONNECT IS M1 RC AT 13
 CONNECT IS M1 RC AT 14
 CONNECT IS M1 RC AT 18
 CONNECT IS M1 RC AT 36
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RSPEC 4 11
 NUMBER OF NODES IS 40

STEREO ATTRIBUTES: NONE
 L23 5421 SEA FILE=REGISTRY SUB=L21 CSS FUL L22
 L30 STR



VAR G1=N/17/19/44
 VAR G2=AK/CB/23/25/29/33/38
 NODE ATTRIBUTES:
 NSPEC IS R AT 44
 CONNECT IS M1 RC AT 4
 CONNECT IS M1 RC AT 7
 CONNECT IS M1 RC AT 13
 CONNECT IS M1 RC AT 14
 CONNECT IS M1 RC AT 44
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RSPEC 4 11
 NUMBER OF NODES IS 42

STEREO ATTRIBUTES: NONE
 L38 1050 SEA FILE=REGISTRY SUB=L23 CSS FUL L30
 L40 SCR 2039 OR 2048 OR 2043 OR 2053
 L41 885 SEA FILE=REGISTRY SUB=L38 CSS FUL L30 NOT L40

100.0% PROCESSED 885 ITERATIONS 885 ANSWERS
 SEARCH TIME: 00.00.01

=> d his

(FILE 'HOME' ENTERED AT 09:04:01 ON 05 JUN 2003)
 SET COST OFF

FILE 'HCAPLUS' ENTERED AT 09:04:25 ON 05 JUN 2003
 E US20030032797/PN

L1 1 S E3
 SEL RN

FILE 'REGISTRY' ENTERED AT 09:04:44 ON 05 JUN 2003
 L2 17 S E1-E17

L3 STR
 L4 50 S L3 CSS
 L5 STR L3
 L6 50 S L5 CSS
 L7 69658 S L5 CSS FUL
 SAV TEMP L7 KRI009/A
 L8 STR L5
 L9 50 S L8 CSS SAM SUB=L7
 L10 63750 S L8 CSS FUL SUB=L7
 L11 STR L8
 L12 50 S L11 CSS SAM SUB=L10
 L13 4961 S L11 CSS FUL SUB=L10
 L14 STR L11
 L15 5383 S L14 CSS FUL SUB=L10
 L16 5378 S L15/COM
 SAV TEMP L16 KRI009A/A
 L17 STR L8
 L18 63853 S L17 CSS FUL SUB=L7
 L19 63849 S L18/COM
 L20 5426 S L14 CSS FUL SUB=L19
 L21 5421 S L20/COM
 DEL KRI009A/A
 SAV TEMP L21 KRI009B/A
 L22 STR L17
 L23 5421 S L22 CSS FUL SUB=L21
 SAV TEMP L23 KRI009C/A
 L24 STR L22
 L25 SCR 2039 OR 2048 OR 2043 OR 2054
 L26 50 S L24 NOT L25 CSS SAM SUB=L23
 L27 SCR 2039 OR 2048 OR 2043 OR 2054 OR 2041 OR 2053
 L28 50 S L24 NOT L27 CSS SAM SUB=L23
 L29 2036 S L24 NOT L27 CSS FUL SUB=L23
 SAV TEMP L29 KRI009CMPD1/A
 L30 STR L24
 L31 32 S L30 NOT L27 CSS SAM SUB=L23
 L32 753 S L30 NOT L27 CSS FUL SUB=L23
 SAV TEMP L32 KRI009CMPD2/A
 L33 4 S L2 AND L29
 L34 4 S L2 AND L32
 L35 9 S L2 AND L23
 L36 1 S L35 NOT L33,L34
 L37 48 S L30 CSS SAM SUB=L23
 L38 1050 S L30 CSS FUL SUB=L23
 SAV TEMP L38 KRI000CMPD2A/A
 L39 297 S L38 NOT L32
 L40 SCR 2039 OR 2048 OR 2043 OR 2053
 L41 885 S L30 NOT L40 CSS FUL SUB=L38
 SAV TEMP L41 KRI000CMPD2B/A
 L42 9 S L2 AND L29,L41
 L43 165 S L38 NOT L41

 FILE 'HCAPLUS' ENTERED AT 10:31:17 ON 05 JUN 2003
 L44 21091 S L29
 L45 11983 S L41
 L46 4624 S L44 AND L45
 L47 482 S L41/P AND L46
 L48 299 S L29 (L) (RCT OR RGT OR RACT)/RL AND L47
 L49 2 S L48 AND AMINE#/CW
 L50 22 S L48 AND AMINE
 L51 20 S L48 AND AMINAT?
 L52 39 S L49-L51
 L53 36 S L52 AND (PD<=20010413 OR PRD<=20010413 OR AD<=20010413)
 E MORIZANE K/AU

L54 12 S E3,E8
 E TANIKAWA H/AU
 L55 3 S E3
 L56 6 S E9
 E KOUNO T/AU
 L57 8 S E3
 L58 8 S E30
 E KOMATSU H/AU
 L59 174 S E3
 L60 50 S E50
 E FUKAZAWA N/AU
 L61 2 S E3
 L62 8 S E24
 E MITSUI/PA,CS
 L63 36569 S E3,E4
 L64 5 S L54-L63 AND L46
 L65 5 S L64 AND L47
 L66 4 S L65 AND L48
 L67 1 S L65 NOT L66
 L68 4 S L1,L66
 L69 2 S L53 AND L68
 L70 4 S L68,L69
 L71 34 S L53 NOT L70
 L72 4 S L71 AND AMINAT#/CW
 L73 0 S L71 AND AMINE#/CW
 L74 8 S L70,L72
 L75 30 S L71 NOT L74

FILE 'REGISTRY' ENTERED AT 11:13:35 ON 05 JUN 2003

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 11:14:03 ON 05 JUN 2003

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FILE COVERS 1907 - 5 Jun 2003 VOL 138 ISS 23

FILE LAST UPDATED: 4 Jun 2003 (20030604/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d l74 all hitstr tot

L74 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2003 ACS

AN 2003:299012 HCAPLUS

DN 138:304469

TI Method for preparation of cytidine nucleoside derivative

IN Tsuchiya, Katsutoshi; Komatsu, Hironori

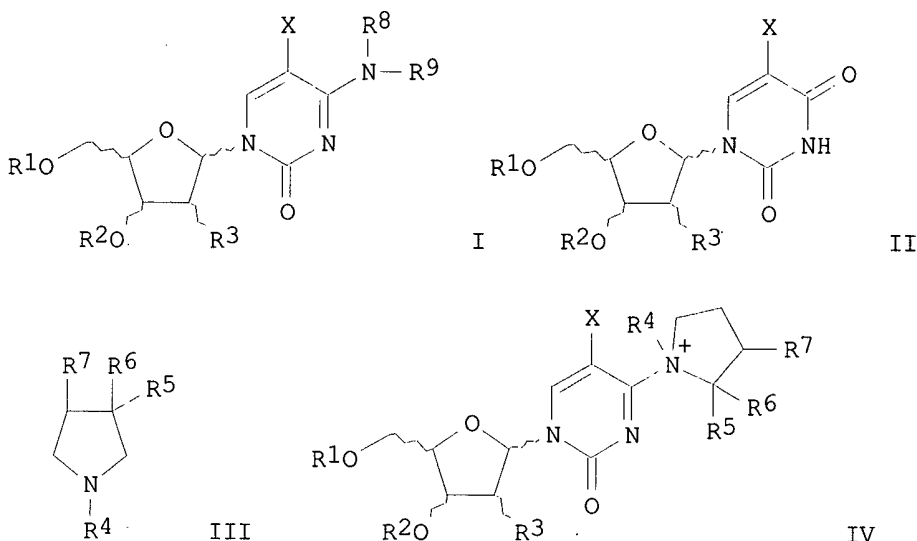
PA Mitsui Chemicals Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C07H019-073
 ICS A61P031-12; A61P035-00; A61K031-7072
 CC 33-9 (Carbohydrates)
 Section cross-reference(s): 1

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003113197	A2	20030418	JP 2001-310880	20011009
PRAI	JP 2001-310880		20011009		
OS	CASREACT 138:304469				
GI					



AB An efficient process for prepn. of cytidine deriv. is provided which resolves faults in prior art, e.g. a process by prepn. of intermediate 4-(1,2,4-triazol-1-yl)pyrimidin-2-(1H)-one deriv. using toxic phosphorus oxychloride and expensive 2,4,6-triisopropylbenzenesulfonyl chloride followed by amination. Cytidine nucleoside derivs. [I; X = (un)substituted C1-4 alkyl, C2-4 alkenyl, C1-4 haloalkyl; R1, R2 = H, (un)substituted C1-6 alkyl, C5-8 cycloalkyl, (un)substituted benzyl, C1-10 aliph. acyl, (un)substituted arom. acyl, C1-10 aliph. sulfonyl, (un)substituted arom. sulfonyl, (un)substituted silyl; R3 = H, halo, C1-4 alkyl, cyano, alkenyl, alkynyl, (un)substituted OH; R8, R9 = H, (un)substituted C1-6 alkyl, C5-8 cycloalkyl, C2-5 alkenyl; or NR8R9 = pyrrolidino, piperidino, azepan-1-yl, 4-oxopiperidino] are prepd. by reaction of uridine derivs. (II; X, R1-R3 = same as above) with a dehydrating agent and a pyrrolidine deriv. [III; R4 = C1-3 alkyl; R5-R7 = H, each (un)substituted C1-4 alkyl or OH; or R5 and R6 together represent oxo] in the presence of a base followed by amination with NH3 or primary or secondary amine of formula HNR8R9 (R8, R9 = same as above). The intermediates are presumably cytidine quaternary ammonium salts (IV; R1-R7, X = same as above) which undergo amination with NH3 or primary or secondary amines. Cytidine derivs. are useful as drugs or agrochems. such as anticancer agents and antiviral agents or intermediates for antisense DNA. Thus, 1.25 mL triethylamine and 0.88 mL N-methylpyrrolidine were added to a soln. of 2.0 g 3',5'-di-O-(4-chlorobenzoyl)thymidine in 5 mL 1,3-dimethylimidazolidin-2-one (DMI), cooled to 0.degree., treated dropwise with a soln. of 1.54 g p-toluenesulfonyl chloride in 2 mL DMI,

followed by rinsing the reagent into the reaction mixt. 1 mL DMI, and the reaction mixt. was stirred at .ltoreq.10.degree. doe 3 h, cooled to 0.degree., treated dropwise with 8 mL 28% aq. NH3 at .ltoreq.10.degree., stirred at .ltoreq.3.degree. for 3 h, mixed with 10 mL H2O, and extd. twice with EtOAc (20 mL and 10 mL). The ext. was washed three-times with 10 mL H2O, concd., stirred with 20 mL MeOH for 2 h under ice-cooling, and filtered to give, after drying the filtered solid at 40.degree. under reduced pressure 1.78 g 3',5'-di-O-(4-chlorobenzoyl)-5-methyldeoxycytidine (78% yield).

- ST cytidine nucleoside prepn intermediate antisense DNA;
chlorobenzoylmethyldeoxycytidine prepn antiviral anticancer; uridine
condensation pyrrolidine; amination ammonolysis cytidine quaternary
ammonium salt
- IT Acid halides
RL: RGT (Reagent); RACT (Reactant or reagent)
(acid chlorides, dehydrating agents; prepn. of cytidine nucleoside
deriv. by reaction of uridine deriv. with pyrrolidine deriv. and
dehydrating agent followed by ammonolysis or amination)
- IT Dehydration reaction
(agents; prepn. of cytidine nucleoside deriv. by reaction of uridine
deriv. with pyrrolidine deriv. and dehydrating agent followed by
ammonolysis or amination)
- IT Anhydrides
RL: RGT (Reagent); RACT (Reactant or reagent)
(dehydrating agents; prepn. of cytidine nucleoside deriv. by reaction
of uridine deriv. with pyrrolidine deriv. and dehydrating agent
followed by ammonolysis or amination)
- IT Antitumor agents
Antiviral agents
(prepn. of cytidine nucleoside deriv. as anticancer or antiviral agent
or intermediate for antisense DNA)
- IT Antisense DNA
RL: PNU (Preparation, unclassified); PREP (Preparation)
(prepn. of cytidine nucleoside deriv. as anticancer or antiviral agent
or intermediate for antisense DNA)
- IT Amination
Ammonolysis
(prepn. of cytidine nucleoside deriv. by reaction of uridine deriv.
with pyrrolidine deriv. and dehydrating agent followed by ammonolysis
or amination)
- IT Deoxyribonucleosides
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of cytidine nucleoside deriv. by reaction of uridine deriv.
with pyrrolidine deriv. and dehydrating agent followed by ammonolysis
or amination)
- IT Amines, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(primary; prepn. of cytidine nucleoside deriv. by reaction of uridine
deriv. with pyrrolidine deriv. and dehydrating agent followed by
ammonolysis or amination)
- IT Amines, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(secondary; prepn. of cytidine nucleoside deriv. by reaction of uridine
deriv. with pyrrolidine deriv. and dehydrating agent followed by
ammonolysis or amination)
- IT 98-59-9, p-Toluenesulfonyl chloride
RL: RGT (Reagent); RACT (Reactant or reagent)
(dehydrating agents; prepn. of cytidine nucleoside deriv. by reaction
of uridine deriv. with pyrrolidine deriv. and dehydrating agent
followed by ammonolysis or amination)
- IT 110-89-4, Piperidine, reactions 111-49-9, Azepane 120-94-5,
N-Methylpyrrolidine 123-75-1, Pyrrolidine, reactions 4449-32-5
7664-41-7, Ammonia, reactions 41661-47-6, 4-Oxopiperidine

RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of cytidine nucleoside deriv. by reaction of uridine deriv. with pyrrolidine deriv. and dehydrating agent followed by ammonolysis or amination)

IT 367511-34-0P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of cytidine nucleoside deriv. by reaction of uridine deriv. with pyrrolidine deriv. and dehydrating agent followed by ammonolysis or amination)

IT 4449-32-5

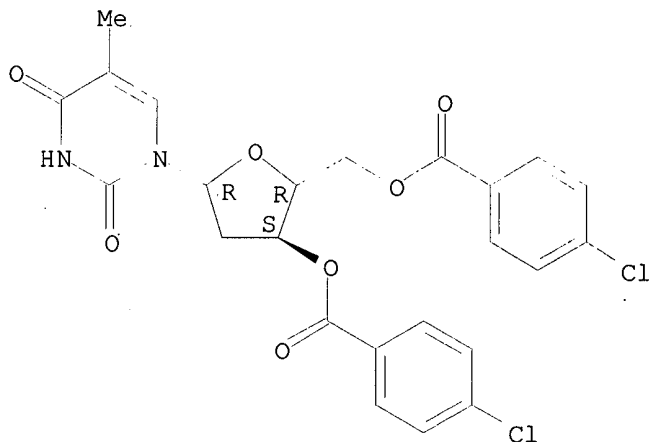
RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of cytidine nucleoside deriv. by reaction of uridine deriv. with pyrrolidine deriv. and dehydrating agent followed by ammonolysis or amination)

RN 4449-32-5 HCAPLUS

CN Thymidine, 3',5'-bis(4-chlorobenzoate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 367511-34-0P

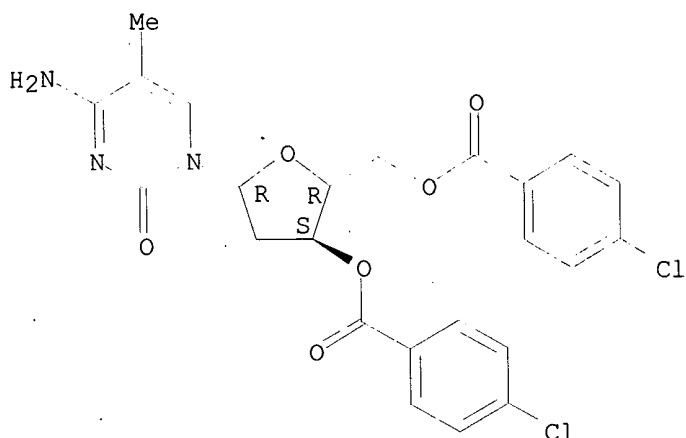
RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of cytidine nucleoside deriv. by reaction of uridine deriv. with pyrrolidine deriv. and dehydrating agent followed by ammonolysis or amination)

RN 367511-34-0 HCAPLUS

CN Cytidine, 2'-deoxy-5-methyl-, 3',5'-bis(4-chlorobenzoate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L74 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2003 ACS

AN 2001:780929 HCAPLUS

DN 135:318660

TI Process for the preparation of cytidine derivatives from uridine derivatives

IN Morizane, Kunihiko; Tanikawa, Hiroharu; Kouno, Toshiyuki; Komatsu, Hironori; Fukazawa, Nobuyuki

PA Mitsui Chemicals, Inc., Japan

SO PCT Int. Appl., 28 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

IC ICM C07H019-067

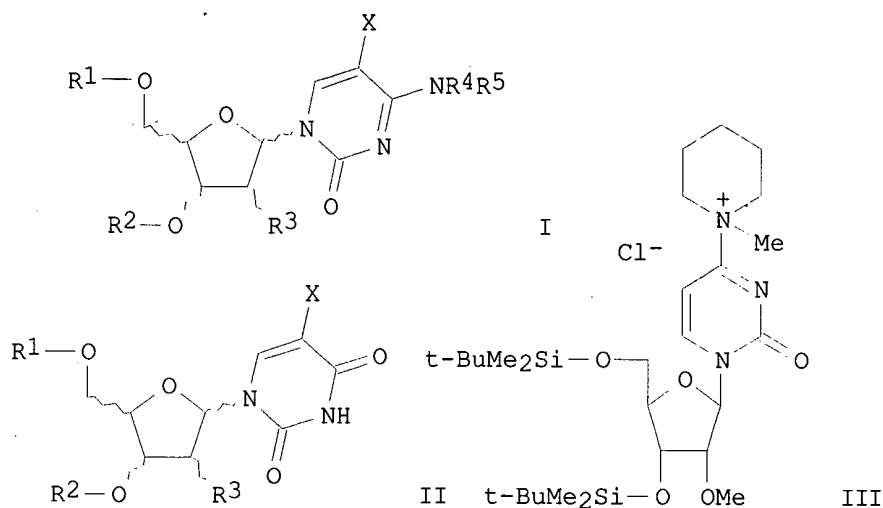
ICS C07H019-073

CC 33-9 (Carbohydrates)

Section cross-reference(s): 1

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001079248	A1	20011025	WO 2001-JP3191	20010413 <--
	W: BR, CN, IN, KR, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	JP 2001354692	A2	20011225	JP 2001-115769	20010413 <--
	EP 1186612	A1	20020313	EP 2001-921831	20010413 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	BR 2001005939	A	20020326	BR 2001-5939	20010413 <--
	US 2003032797	A1	20030213	US 2002-9805	20020306 <--
PRAI	JP 2000-112361	A	20000413	<--	
	WO 2001-JP3191	W	20010413	<--	
OS	CASREACT 135:318660; MARPAT 135:318660				
GI					



AB Cytidine derivs. (I; X = H, halo, C1-4 alkyl, C1-4 haloalkyl, C2-4 alkenyl; R1, R2 = H, hydroxy-protecting group; R3 = H, halo, HO, C1-4 alkyl, cyano, alkenyl, alkynyl, C1-4 alkoxy, HO substituted by a hydroxy-protecting group; R4, R5 = H, C1-4 alkyl, C5-8 cycloalkyl, C1-4 haloalkyl, C2-4 alkenyl; or R4 and R5 are linked together to form a ring) are prepd. by condensation of uridine derivs. (II; X, R1, R2, R3 = same as above) with a tertiary **amine** and a dehydrating agent and then **amination** of the intermediate quaternary ammonium salt with NH₃ or primary or secondary **amine** of formula HDR₄R₅ (R₄, R₅ = same as above). An efficient synthesis of cytidine derivs. is attained by using a tertiary **amine** to thereby overcome the disadvantages of the prior art which uses 1,2,4-triazole and requires long reaction time and extn. step. This process shortens reaction time and simplifies procedures and is suitable for large scale prodn. of cytidine derivs. which are useful as anticancer agents and antiviral agents (no data). Thus, 0.23 mL 1-methylpiperidine and 0.45 mL Et₃N were added to a soln. of 750 mg 3',5'-O-bis(tert-butyldimethylsilyl)-2'-O-methyluridine in 10 mL MeCN, cooled, treated dropwise with a soln. of 614 mg p-toluenesulfonyl chloride in 5 mL MeCN under ice-cooling, and stirred for 1 h to give an soln. of an intermediate (III). To the latter reaction soln. was added dropwise 3.5 mL 28% aq. NH₃ and stirred for 2 h to give 73% 3',5'-O-bis(tert-butyldimethylsilyl)-2'-O-methylcytidine.

ST cytidine deriv prepn antiviral anticancer; **amination** cytidine quaternary ammonium salt; tertiary **amine** condensation uridine

IT **Amination**

(cytidine derivs. by condensation of tertiary **amine** with uridine derivs. and **amination** of intermediate quaternary ammonium salt with primary **amines** or secondary **amines**)

IT Antitumor agents

Antiviral agents

(prepn. of cytidine derivs. as anticancer and antiviral agents by condensation of tertiary **amine** with uridine derivs. and **amination** of intermediate quaternary ammonium salt with primary **amines** or secondary **amines**)

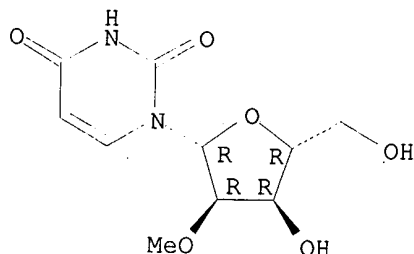
IT **Amines, reactions**

RL: RCT (Reactant); RACT (Reactant or reagent)

(primary; prepn. of cytidine derivs. as anticancer and antiviral agents by condensation of tertiary **amine** with uridine derivs. and **amination** of intermediate quaternary ammonium salt with primary **amines** or secondary **amines**)

- IT **Amines, reactions**
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (secondary; prepn. of cytidine derivs. as anticancer and antiviral agents by condensation of tertiary **amine** with uridine derivs. and **amination** of intermediate quaternary ammonium salt with primary **amines** or secondary **amines**)
- IT 65-71-4, Thymine 121-44-8, Triethylamine, reactions 280-57-9, 1,4-Diazabicyclo[2.2.2]octane 626-67-5, 1-Methylpiperidine 1122-58-3, 4-Dimethylaminopyridine 2140-76-3, 2'-O-Methyluridine 3601-90-9, 3,5-O-Bis(4-chlorobenzoyl)-2-deoxy-D-ribofuranosyl chloride 7664-41-7, Ammonia, reactions 18162-48-6, tert-Butyldimethylsilyl chloride 367511-26-0, 3',5'-O-Bis(4-chlorobenzoyl)-2'-O-methyluridine
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. of cytidine derivs. as anticancer and antiviral agents by condensation of tertiary **amine** with uridine derivs. and **amination** of intermediate quaternary ammonium salt with primary **amines** or secondary **amines**)
- IT 4449-32-5P, 3,5-O-Bis(4-chlorobenzoyl)thymidine 367511-34-0P 367511-37-3P, 3',5'-O-Bis(tert-butyldimethylsilyl)-2'-O-methyluridine 367511-40-8P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. of cytidine derivs. as anticancer and antiviral agents by condensation of tertiary **amine** with uridine derivs. and **amination** of intermediate quaternary ammonium salt with primary **amines** or secondary **amines**)
- IT 5241-10-1P 367511-29-3P 367511-42-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of cytidine derivs. as anticancer and antiviral agents by condensation of tertiary **amine** with uridine derivs. and **amination** of intermediate quaternary ammonium salt with primary **amines** or secondary **amines**)
- RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
- RE
 (1) American Chemical Society; Database CAPLUS on STN
 (2) American Chemical Society; Database CAPLUS on STN
 (3) American Chemical Society; Database CAPLUS on STN
 (4) Mitsui Chemicals Ltd; JP 2000327693 A 2000 HCAPLUS
 (5) Tokyo Yakka University; JP 06329560 A 1994 HCAPLUS
 (6) Yamasa Corporation; JP 01143892 A 1989 HCAPLUS
- IT 2140-76-3, 2'-O-Methyluridine 367511-26-0, 3',5'-O-Bis(4-chlorobenzoyl)-2'-O-methyluridine
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. of cytidine derivs. as anticancer and antiviral agents by condensation of tertiary **amine** with uridine derivs. and **amination** of intermediate quaternary ammonium salt with primary **amines** or secondary **amines**)
- RN 2140-76-3 HCAPLUS
 CN Uridine, 2'-O-methyl- (7CI, 8CI, 9CI) (CA INDEX NAME)

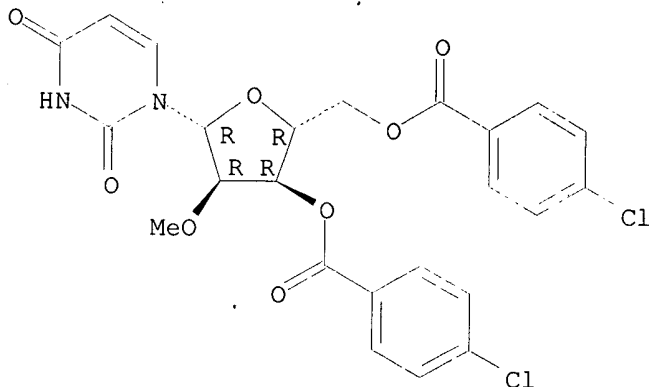
Absolute stereochemistry.



RN 367511-26-0 HCAPLUS

CN Uridine, 2'-O-methyl-, 3',5'-bis(4-chlorobenzoate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 4449-32-5P, 3,5-O-Bis(4-chlorobenzoyl)thymidine

367511-34-0P 367511-37-3P, 3',5'-O-Bis(tert-butyltrimethylsilyl)-2'-O-methyluridine 367511-40-8P

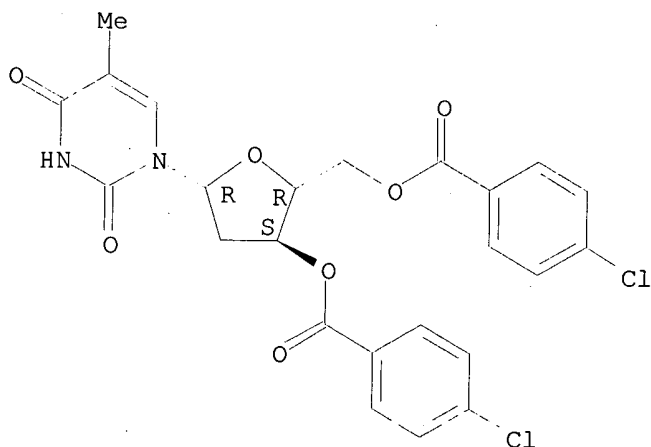
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of cytidine derivs. as anticancer and antiviral agents by condensation of tertiary amine with uridine derivs. and amination of intermediate quaternary ammonium salt with primary amines or secondary amines)

RN 4449-32-5 HCAPLUS

CN Thymidine, 3',5'-bis(4-chlorobenzoate) (9CI) (CA INDEX NAME)

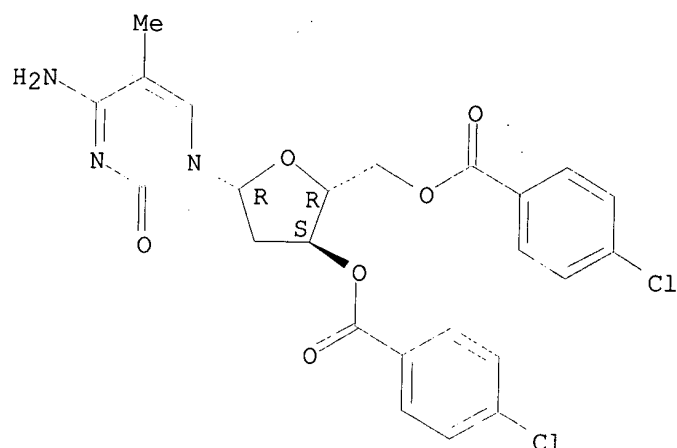
Absolute stereochemistry.



RN 367511-34-0 HCAPLUS

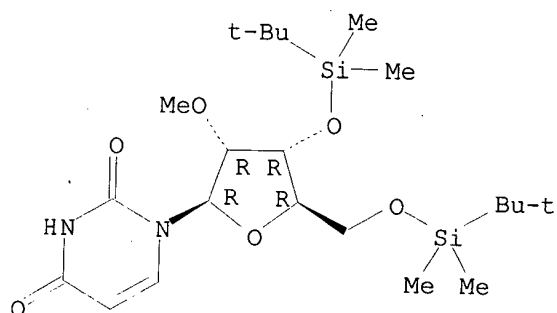
CN Cytidine, 2'-deoxy-5-methyl-, 3',5'-bis(4-chlorobenzoate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



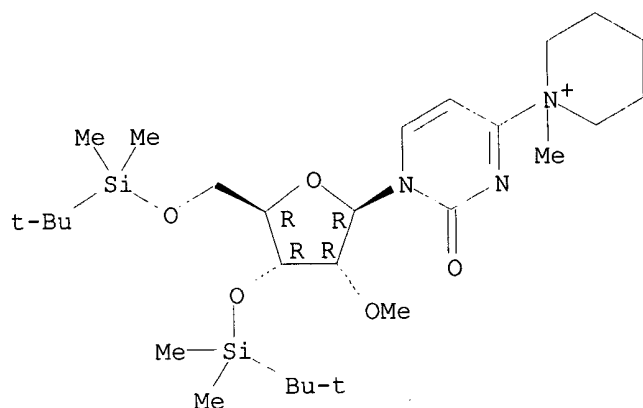
RN 367511-37-3 HCAPLUS
 CN Uridine, 3',5'-bis-O-[(1,1-dimethylethyl)dimethylsilyl]-2'-O-methyl- (9CI)
 (CA INDEX NAME)

Absolute stereochemistry.



RN 367511-40-8 HCAPLUS
 CN Piperidinium, 1-[1-[3,5-bis-O-[(1,1-dimethylethyl)dimethylsilyl]-2-O-methyl-.beta.-D-ribofuranosyl]-1,2-dihydro-2-oxo-4-pyrimidinyl]-1-methyl-, chloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● Cl⁻

IT 5241-10-1P 367511-29-3P 367511-42-0P

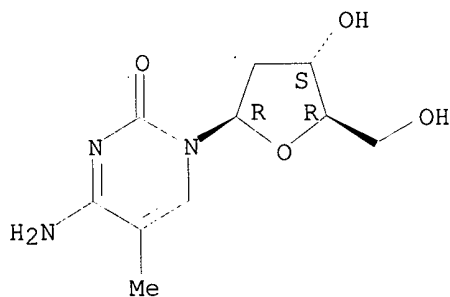
RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of cytidine derivs. as anticancer and antiviral agents by condensation of tertiary **amine** with uridine derivs. and **amination** of intermediate quaternary ammonium salt with primary **amines** or secondary **amines**)

RN 5241-10-1 HCAPLUS

CN Cytidine, 2'-deoxy-5-methyl-, monohydrochloride (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

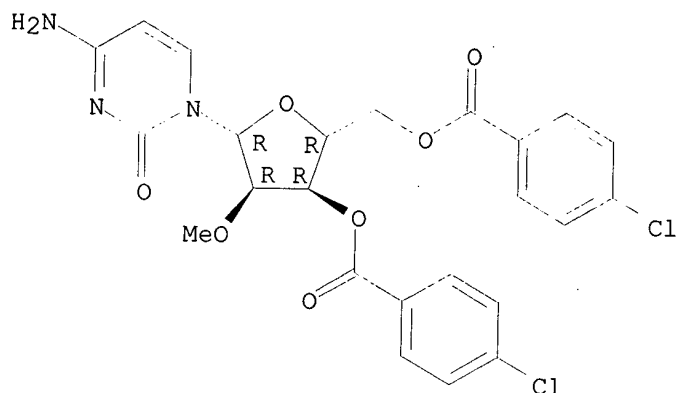


● HCl

RN 367511-29-3 HCAPLUS

CN Cytidine, 2'-O-methyl-, 3',5'-bis(4-chlorobenzoate) (9CI) (CA INDEX NAME)

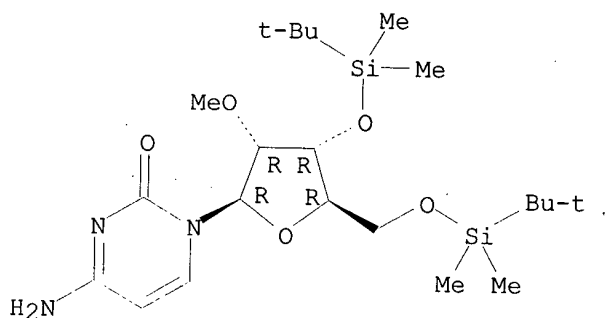
Absolute stereochemistry.



RN 367511-42-0 HCAPLUS

CN Cytidine, 3',5'-bis-O-[(1,1-dimethylethyl)dimethylsilyl]-2'-O-methyl-
(9CI) (CA INDEX NAME)

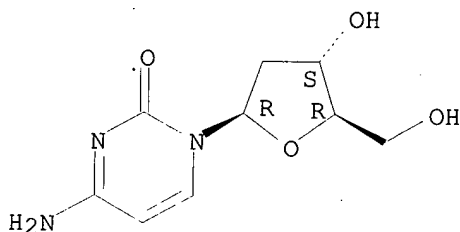
Absolute stereochemistry.



- L74 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2003 ACS
 AN 2001:675221 HCAPLUS
 DN 136:6266
 TI Large-scale manufacturing of all four 2'-deoxynucleosides via novel strategies including a chemo-enzymatic process
 AU **Komatsu, Hironori**; Awano, Hirokazu; **Tanikawa, Hiroharu**
 ; Itou, Kiyoshi; Ikeda, Ichirou
 CS Chemical Synthesis Laboratory, **Mitsui Chemicals Inc.**, Mobara,
 297-0017, Japan
 SO Nucleosides, Nucleotides & Nucleic Acids (2001), 20(4-7), 1291-1293
 CODEN: NNNAFY; ISSN: 1525-7770
 PB Marcel Dekker, Inc.
 DT Journal
 LA English
 CC 33-9 (Carbohydrates)
 Section cross-reference(s): 7, 9
 AB A chem. synthesis of 2-deoxyribose-1-phosphate and its enzymic conversion into purine 2'-deoxynucleosides (dNus) are shown. Besides the chemo-enzymic process for purine dNus, a modified process for practical dC prepn. is also established. Consequently, a series of practical manufg. processes of all four dNus have been realized via novel strategies.
 ST deoxynucleoside manufg chemoenzymic coupling nucleobase
 deoxyribosephosphate
 IT Nucleosides, preparation
 RL: BPN (Biosynthetic preparation); IMF (Industrial manufacture); SPN

- (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(deoxynucleosides; large-scale manufg. of all four 2'-deoxynucleosides
via novel strategies including a chemo-enzymic process)
- IT Coupling reaction
(large-scale manufg. of all four 2'-deoxynucleosides via novel
strategies including a chemo-enzymic process)
- IT 958-09-8P, 2'-Deoxyadenosine 961-07-9P, 2'-Deoxyguanosine
3992-42-5P, 2'-Deoxycytidine hydrochloride
RL: BPN (Biosynthetic preparation); SPN (Synthetic preparation); BIOL
(Biological study); PREP (Preparation)
(large-scale manufg. of all four 2'-deoxynucleosides via novel
strategies including a chemo-enzymic process)
- IT 9030-21-1, Purine nucleoside phosphorylase
RL: CAT (Catalyst use); USES (Uses)
(large-scale manufg. of all four 2'-deoxynucleosides via novel
strategies including a chemo-enzymic process)
- IT 73-24-5, Adenine, reactions 73-40-5, Guanine 626-67-5,
N-Methylpiperidine 10457-14-4, Bis(trimethylsilyl)Uracil 21740-23-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(large-scale manufg. of all four 2'-deoxynucleosides via novel
strategies including a chemo-enzymic process)
- IT **5173-91-1P** 17039-17-7P **127970-42-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
(large-scale manufg. of all four 2'-deoxynucleosides via novel
strategies including a chemo-enzymic process)
- RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
- RE
- (1) Friedkin, M; J Biol Chem 1950, V184, P449 HCAPLUS
 - (2) Friedkin, M; J Biol Chem 1950, V184, P461
 - (3) Kawakami, H; Chem Lett 1989, P235 HCAPLUS
 - (4) Reese, C; Tetrahedron Lett 1980, V21, P2265 HCAPLUS
- IT **3992-42-5P**, 2'-Deoxycytidine hydrochloride
RL: BPN (Biosynthetic preparation); SPN (Synthetic preparation); BIOL
(Biological study); PREP (Preparation)
(large-scale manufg. of all four 2'-deoxynucleosides via novel
strategies including a chemo-enzymic process)
- RN 3992-42-5 HCAPLUS
- CN Cytidine, 2'-deoxy-, monohydrochloride (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

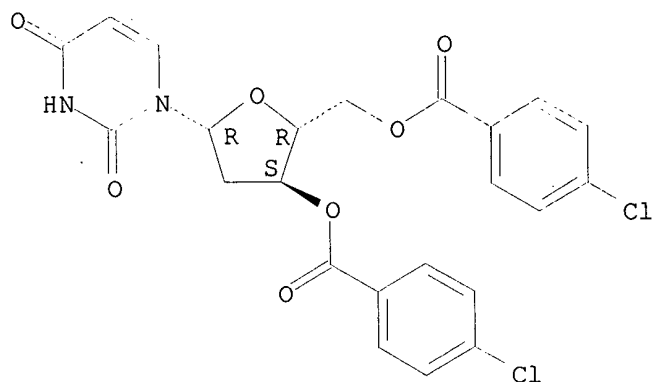


● HCl

- IT **5173-91-1P** **127970-42-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
(large-scale manufg. of all four 2'-deoxynucleosides via novel
strategies including a chemo-enzymic process)
- RN 5173-91-1 HCAPLUS

CN Uridine, 2'-deoxy-, 3',5'-bis(4-chlorobenzoate) (9CI) (CA INDEX NAME)

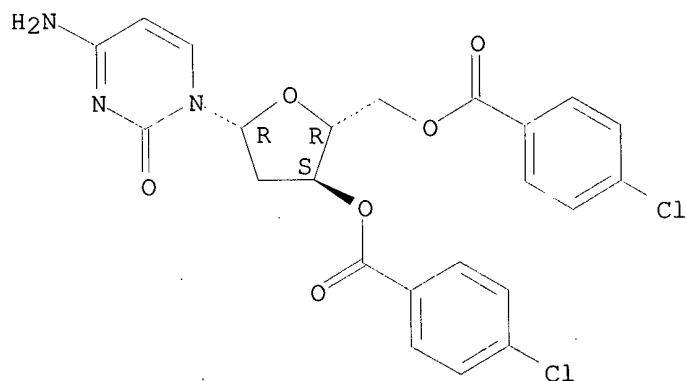
Absolute stereochemistry.



RN 127970-42-7 HCAPLUS

CN Cytidine, 2'-deoxy-, 3',5'-bis(4-chlorobenzoate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L74 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2003 ACS

AN 1990:497957 HCAPLUS

DN 113:97957

TI Transformation of uridine derivatives into cytidines via selective **amination**

AU Krug, A.; Schmidt, S.; Lekhschas, J.; Lemke, K.; Cech, D.

CS Sekt. Chem., Humboldt-Univ. Berlin, Berlin, DDR-1040, Ger. Dem. Rep.

SO Journal fuer Praktische Chemie (Leipzig) (1989), 331(5), 835-42

CODEN: JPCEAO; ISSN: 0021-8383

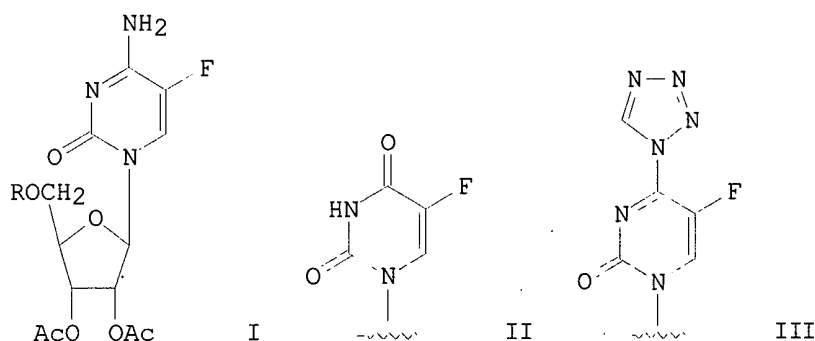
DT Journal

LA German

CC 33-9 (Carbohydrates)

OS CASREACT 113:97957

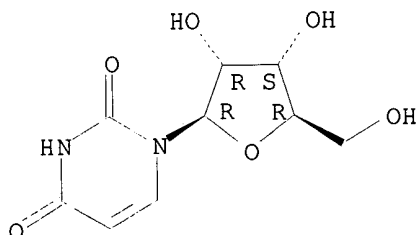
GI



- AB 5-Fluorocytidines I [R = Ac, P(O)(OH)₂] were prepd. via **amination** of uridine II. 5-Substituted 4-tetrazolopyrimidinones III are key intermediates in the procedure. The method is extended to other fluorinated starting materials, e.g. fluorinated uridine dinucleotide or 2'-deoxy-2'-fluorouridine. The fluorinated starting materials were prepd. by fluorination with F.
- ST fluorocytidine; cytidine fluoro; **amination** fluorouridine; uridine fluoro **amination**
- IT **Amination**
(regioselective, of fluorouridines)
- IT **58-96-8**, Uridine 58-97-9, 5'-Uridylic acid, reactions
RL: **RCT (Reactant)**; **RCT (Reactant or reagent)**
(fluorination of)
- IT **128963-07-5P 128963-08-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and aminolysis of)
- IT **128963-10-0P 128985-05-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and deacetylation of)
- IT 128963-05-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and fluorination of)
- IT **55474-11-8P 67550-04-3P 128963-06-4P**
RL: **RCT (Reactant)**; SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(prepn. and regioselective **amination** of)
- IT **10212-20-1P 31535-27-0P 128985-06-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
- IT **2341-22-2P**, 5-Fluorocytidine
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, from fluorouridine)
- IT **128963-09-7**
RL: **RCT (Reactant)**; **RACT (Reactant or reagent)**
(reaction of, with chlorophenyl phosphorodichloridate and tetrazole)
- IT 362-43-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with chlorophenyl phosphoroditriazolidine)
- IT 62420-37-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with isopropylideneuridine)
- IT 288-94-8, 1H-Tetrazole
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with nucleosides and chlorophenyl phosphorodichloridate)

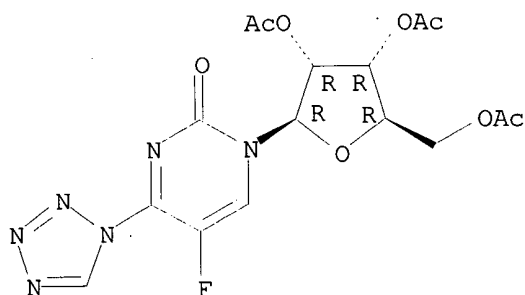
IT 772-79-2, 4-Chlorophenyl phosphorodichloridate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with tetrazole and nucleosides)
 IT 58-96-8, Uridine
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (fluorination of)
 RN 58-96-8 HCAPLUS
 CN Uridine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



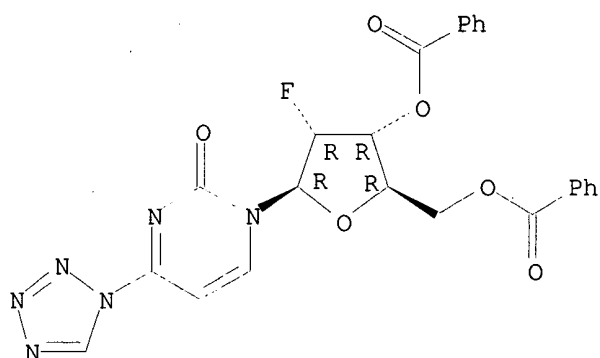
IT 128963-07-5P 128963-08-6P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (prepn. and aminolysis of)
 RN 128963-07-5 HCAPLUS
 CN 2(1H)-Pyrimidinone, 5-fluoro-4-(1H-tetrazol-1-yl)-1-(2,3,5-tri-O-acetyl-
 .beta.-D-ribofuranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 128963-08-6 HCAPLUS
 CN 2(1H)-Pyrimidinone, 1-(3,5-di-O-benzoyl-2-deoxy-2-fluoro-.beta.-D-
 ribofuranosyl)-4-(1H-tetrazol-1-yl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



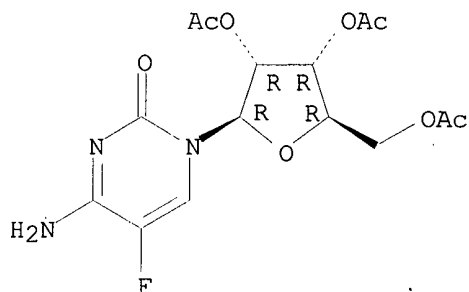
IT **128963-10-0P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and deacetylation of)

RN 128963-10-0 HCAPLUS

CN Cytidine, 5-fluoro-, 2',3',5'-triacetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



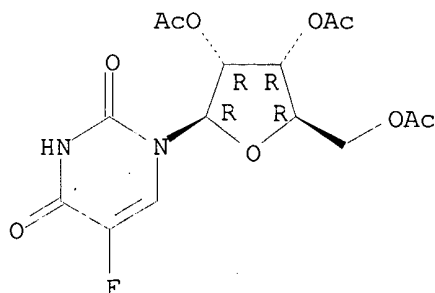
IT **55474-11-8P**

RL: **RCT (Reactant)**; SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(prepn. and regioselective amination of)

RN 55474-11-8 HCAPLUS

CN Uridine, 5-fluoro-, 2',3',5'-triacetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.

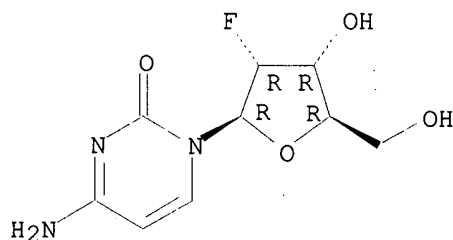


IT **10212-20-1P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

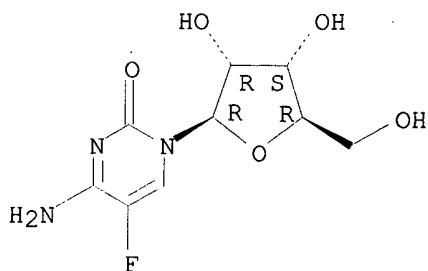
RN 10212-20-1 HCAPLUS
 CN Cytidine, 2'-deoxy-2'-fluoro- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



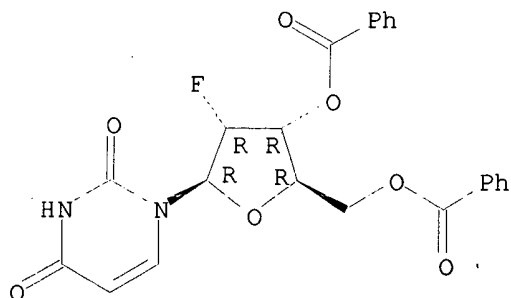
IT **2341-22-2P**, 5-Fluorocytidine
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, from fluorouridine)
 RN 2341-22-2 HCAPLUS
 CN Cytidine, 5-fluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



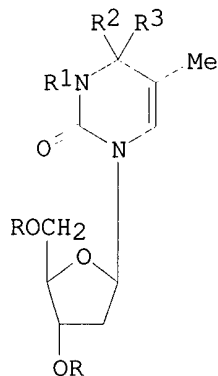
IT **128963-09-7**
 RL: **RCT (Reactant); RACT (Reactant or reagent)**
 (reaction of, with chlorophenyl phosphorodichloridate and tetrazole)
 RN 128963-09-7 HCAPLUS
 CN Uridine, 2'-deoxy-2'-fluoro-, 3',5'-dibenzoate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L74 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2003 ACS
 AN 1982:104663 HCAPLUS
 DN 96:104663
 TI Chemical conversion of thymidine into 5-methyl-2'-deoxycytidine
 AU Sung, Wing L.

CS Div. Biol. Sci., Natl. Res. Counc. Canada, Ottawa, CA, K1A 0R6, USA
 SO Journal of the Chemical Society, Chemical Communications (1981),
 (20), 1089
 CODEN: JCCCAT; ISSN: 0022-4936
 DT Journal
 LA English
 CC 33-9 (Carbohydrates)
 Section cross-reference(s): 28
 GI

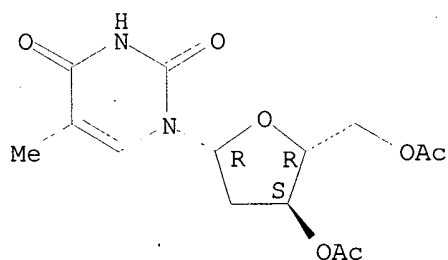


I.

- AB Treating thymidine derivs. I (R = SiMe₂CMe₃, COMe, R₁ = H, R₂R₃ = O) with 3.0 mol equiv 1,2,4-triazole and 1.5 mol equiv 4-ClC₆H₄OPOCl₂ in pyridine at room temp. 3 days gave 72-73% triazolylpyrimidinones I (R₁R₂ = bond, R₃ = 1,2,4-triazol-1-yl) (II). Treating II with aq. NH₃ in dioxane at room temp. 1 h gave 85-89% deoxycytidines I (R = SiMe₂CMe₃, OH, R₁R₂ = bond, R₃ = NH₂).
- ST methyldeoxycytidine; deoxycytidine methyl; cytidine deoxy methyl; thymidine condensation triazole **amination**
- IT Condensation reaction
 (of thymidine derivs. with triazole, in prepn. of deoxycytidine derivs.)
- IT **Amination**
 (of triazolyl nucleosides, methyldeoxycytidines by)
- IT Nucleosides, preparation
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of methyldeoxycytidine, from diacetylthymidine via triazolylpyrimidinone nucleoside)
- IT 772-79-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (condensation reaction of thymidine derivs. with triazole in presence of)
- IT 288-88-0
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (condensation reaction of, with thymidine derivs., in prepn. of methyldeoxycytidine derivs.)
- IT 6979-97-1 40733-26-4
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (condensation reaction of, with triazole, in methyldeoxycytidine prepn.)
- IT 80991-40-8P 80991-41-9P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. and **amination** of)
- IT 80991-42-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)

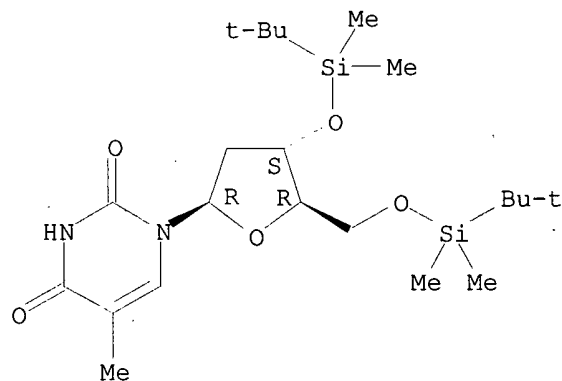
(prepn. of)
 IT **838-07-3P**
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, from diacetylthymidine via triazolympyrimidone nucleoside)
 IT **6979-97-1 40733-26-4**
 RL: **RCT (Reactant); RACT (Reactant or reagent)**
 (condensation reaction of, with triazole, in methyldeoxycytidine
 prepn.)
 RN 6979-97-1 HCAPLUS
 CN Thymidine, 3',5'-diacetate (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



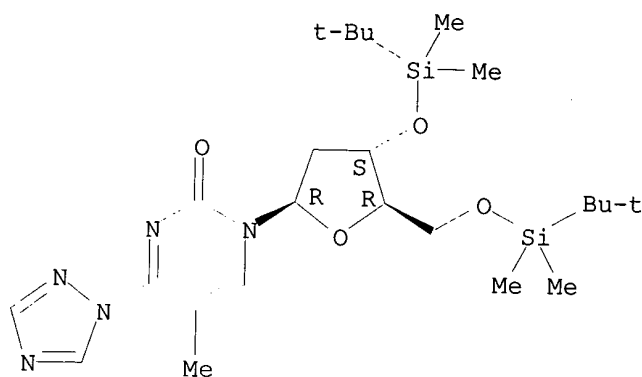
RN 40733-26-4 HCAPLUS
 CN Thymidine, 3',5'-bis-O-[(1,1-dimethylethyl)dimethylsilyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **80991-40-8P 80991-41-9P**
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (prepn. and **amination** of)
 RN 80991-40-8 HCAPLUS
 CN 2(1H)-Pyrimidinone, 1-[2-deoxy-3,5-bis-O-[(1,1-dimethylethyl)dimethylsilyl]-.beta.-D-erythro-pentofuranosyl]-5-methyl-4-(1H-1,2,4-triazol-1-yl)- (9CI) (CA INDEX NAME)

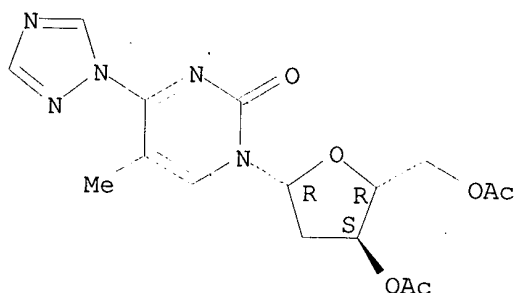
Absolute stereochemistry.



RN 80991-41-9 HCAPLUS

CN 2(1H)-Pyrimidinone, 1-(3,5-di-O-acetyl-2-deoxy-.beta.-D-erythro-pentofuranosyl)-5-methyl-4-(1H-1,2,4-triazol-1-yl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



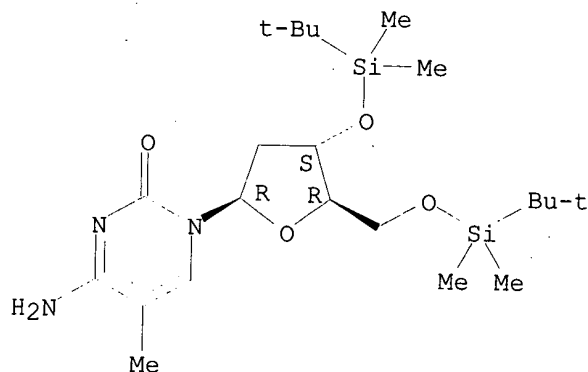
IT 80991-42-0P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 80991-42-0 HCAPLUS

CN Cytidine, 2'-deoxy-3',5'-bis-O-[(1,1-dimethylethyl)dimethylsilyl]-5-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

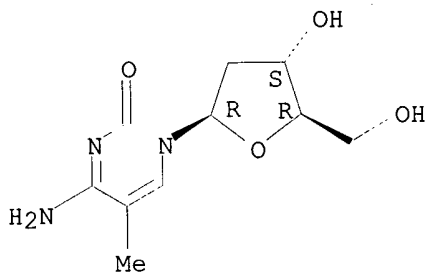


IT 838-07-3P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, from diacetylthymidine via triazolylpyrimidone nucleoside)

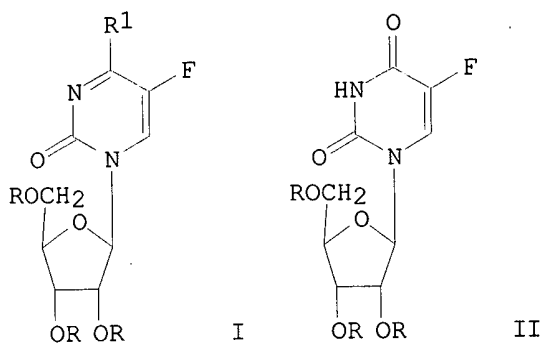
RN 838-07-3 HCAPLUS
 CN Cytidine, 2'-deoxy-5-methyl- (6CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L74 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2003 ACS
 AN 1981:551115 HCAPLUS
 DN 95:151115
 TI 5-Fluorocytidine
 PA Mitsui Toatsu Chemicals, Inc., Japan
 SO Jpn. Kokai Tokkyo Koho, 3 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC C07H019-06
 CC 33-7 (Carbohydrates)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 56059794	A2	19810523	JP 1979-135939	19791023 <--
	JP 62023757	B4	19870525		
PRAI	JP 1979-135939		19791023	<--	
GI					



AB The title compd. (I, R = H, R1 = NH2) was prepd. by chlorination of the acylfluorouridine II (R = acyl) followed by **amination** of I (R = acyl, R1 = Cl) and subsequent deacylation. Thus, 1.94 g II (R = Ac) in DMF was refluxed with SOCl2, the resulting oil treated with NH3-EtOH for 3.5 h, and the product hydrolyzed to give 1.0 g I (R = H, R1 = NH2).

ST fluorocytidine; cytidine fluoro

IT 55474-11-8

RL: RCT (Reactant); RACT (Reactant or reagent)
 (chlorination of)

IT 79343-28-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. and **amination** of)

IT **2341-22-2P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

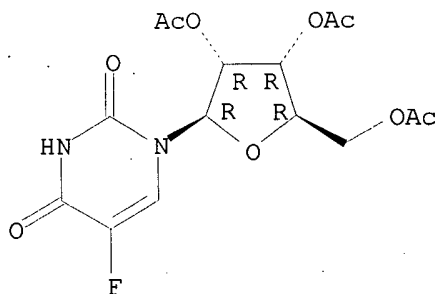
IT **55474-11-8**

RL: **RCT (Reactant); RACT (Reactant or reagent)**
(chlorination of)

RN 55474-11-8 HCAPLUS

CN Uridine, 5-fluoro-, 2',3',5'-triacetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



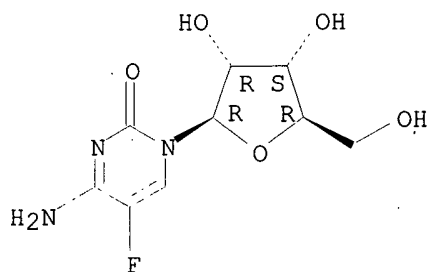
IT **2341-22-2P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 2341-22-2 HCAPLUS

CN Cytidine, 5-fluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L74 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2003 ACS

AN 1980:198686 HCAPLUS

DN 92:198686

TI 2'-Deoxy-5-methylcytidine. **Amination** of thymidine

AU Vorbrueggen, Helmut; Krolkiewicz, Konrad

CS Schering A.-G., Berlin, 1000/65, Fed. Rep. Ger.

SO Nucl. Acid Chem. (1978), Volume 1, 227-9. Editor(s): Townsend,

Leroy B.; Tipson, R. Stuart. Publisher: Wiley, New York, N. Y.

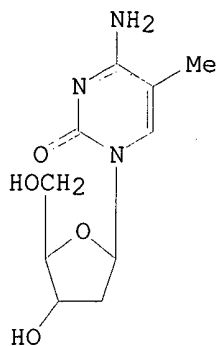
CODEN: 42TBAU

DT Conference

LA English

CC 33-7 (Carbohydrates)

GI



AB A mixt. of thymidine, hexamethyldisilazane, HCONH₂, and (NH₄)₂SO₄ was autoclaved 72 h at 130-5.degree., and the product was refluxed with MeOH to give after silica column chromatog. 75% deoxymethylcytidine I.

ST deoxymethylcytidine; cytidine deoxy methyl; **amination** thymidine

IT **Amination**
(of thymidine, deoxymethylcytidine from)

IT 50-89-5, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(amination of, deoxymethylcytidine from)

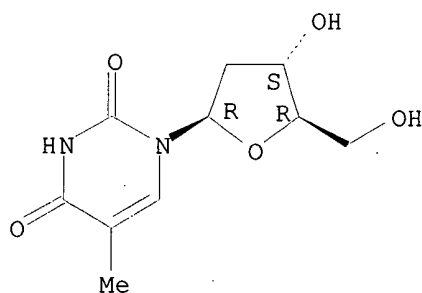
IT 838-07-3P 5241-10-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

IT 50-89-5, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(amination of, deoxymethylcytidine from)

RN 50-89-5 HCAPLUS

CN Thymidine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

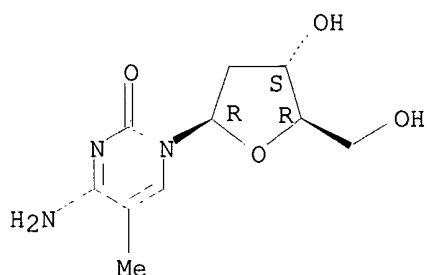


IT 838-07-3P 5241-10-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 838-07-3 HCAPLUS

CN Cytidine, 2'-deoxy-5-methyl- (6CI, 8CI, 9CI) (CA INDEX NAME)

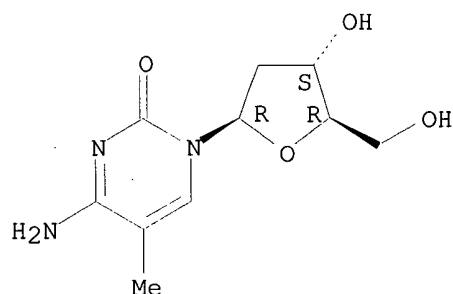
Absolute stereochemistry.



RN 5241-10-1 HCAPLUS

CN Cytidine, 2'-deoxy-5-methyl-, monohydrochloride (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



● HCl

L74 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2003 ACS

AN 1979:23542 HCAPLUS

DN 90:23542

TI 2'-Deoxy-5-methylcytidine: **Amination** of thymidine

AU Vorbrueggen, Helmut; Krolikiewicz, Konrad

CS Schering A.-G., Berlin, Fed. Rep. Ger.

SO Nucleic Acid Chem. (1978), Volume 1, 227-9. Editor(s):

Townsend, Leroy B.; Tipson, R. Stuart. Publisher: Wiley, New York, N. Y.

CODEN: 39GCA6

DT Conference

LA English

CC 33-7 (Carbohydrates)

AB Autoclaving thymidine, (Me₃Si)₂NH, HCONH₂, and (NH₄)₂SO₄ at 130-5.degree. for 72 h gave 75% 2'-deoxy-5-methylcytidine, which was converted to the hydrochloride and recrystd. from EtOH.ST deoxymethylcytidine; cytidine deoxy methyl; **amination** thymidineIT **Amination**

(of thymidine, 2'-deoxy-5-methylcytidine from)

IT 50-89-5, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(amination of, 2'-deoxy-5-methylcytidine from)

IT 838-07-3P 68696-19-5P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of)

IT 50-89-5, reactions

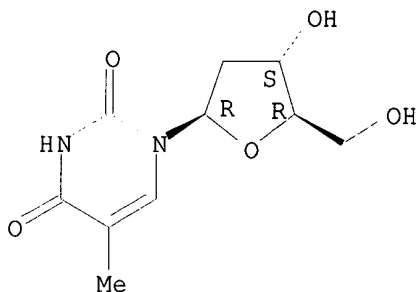
RL: RCT (Reactant); RACT (Reactant or reagent)

(amination of, 2'-deoxy-5-methylcytidine from)

RN 50-89-5 HCAPLUS

CN Thymidine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



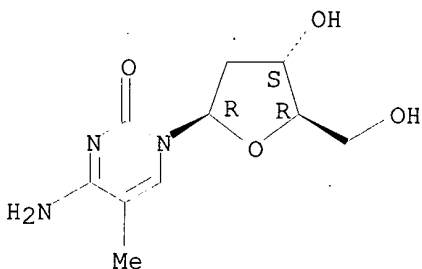
IT 838-07-3P 68696-19-5P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 838-07-3 HCAPLUS

CN Cytidine, 2'-deoxy-5-methyl- (6CI, 8CI, 9CI) (CA INDEX NAME)

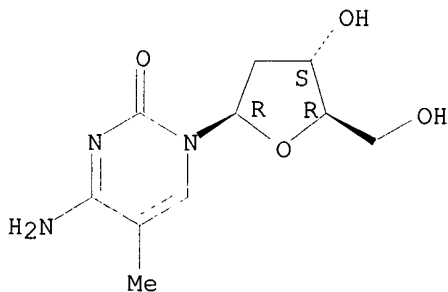
Absolute stereochemistry.



RN 68696-19-5 HCAPLUS

CN Cytidine, 2'-deoxy-5-methyl-, hydrochloride (6CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



●_x HCl

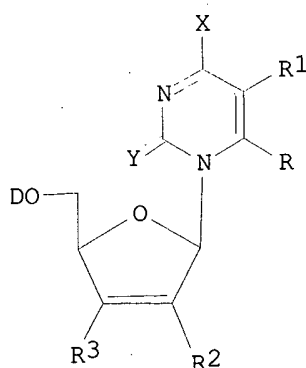
=> d all hitstr tot

L75 ANSWER 1 OF 30 HCAPLUS COPYRIGHT 2003 ACS
 AN 2002:314958 HCAPLUS
 DN 136:340939
 TI Preparation of modified nucleosides for treatment of viral infections and abnormal cellular proliferation
 IN Stuyver, Lieven; Watanabe, Kyoichi A.
 PA Pharmasset Limited, USA
 SO PCT Int. Appl., 230 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM C07H019-00
 CC 33-9 (Carbohydrates)
 Section cross-reference(s): 1, 7, 10, 63

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002032920	A2	20020425	WO 2001-US46113	20011018 <--
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	AU 2002028749	A5	20020429	AU 2002-28749	20011018 <--
	US 2003087873	A1	20030508	US 2001-45292	20011018 <--
PRAI	US 2000-241488P	P	20001018	<--	
	US 2001-282156P	P	20010406	<--	
	WO 2001-US46113	W	20011018		

GI



AB Modified nucleosides, e.g. I, wherein D is hydrogen, alkyl, acyl, monophosphate, diphosphate, triphosphate, monophosphate ester, diphosphate ester, triphosphate ester, phospholipid or amino acid; X is H, halogen, NH₂, substituted **amine**, oxime, OH, alkoxy, SH, thioalkyl; Y is O, S, Se; R and R₁ are independently H, alkyl, alkenyl, alkynyl, aryl, alkylaryl, halogen, NH₂, substituted **amine**, oxime, hydrazine, OH, alkoxy, SH, thioalkyl, NO₂, NO, CH₂OH, CH₂OH, ester, CONH₂, amide, CN; R₂ and R₃ are independently H, halogen, OH, SH, OMe, SMe, NH₂, NHMe,

CH:CH₂, CN, CH₂NH₂, CH₂OH, CO₂H; were prepd. for treating a Flaviviridae (including BVDV and HCV), Orthomyxoviridae (including Influenza A and B) or Paramyxoviridae (including RSV) infection, or conditions related to abnormal cellular proliferation, in a host, including animals, and esp. humans. This invention also provides an effective process to quantify the viral load, and in particular BVDV, HCV or West Nile Virus load, in a host, using real-time polymerase chain reaction ("TR-PCR"). Addnl., the invention discloses probe mols. that can fluoresce proportionally to the amt. of virus present in a sample. Thus, (1'R,2'S,3'R,4'R)-1-[2,3-dihydroxy-4-(hydroxymethyl)cyclopentan-1-yl]-5-fluorocytosine was prepd. and tested in vitro as antiviral and antitumor agent.

- ST cytotoxicity nucleoside prepn antiviral antitumor human antiinfluenza; polymerase chain reaction nucleoside prepn antiviral antitumor human antiinfluenza; nucleoside prepn antiviral antitumor human antiinfluenza Orthomyxoviridae Paramyxoviridae Flaviviridae
- IT Antitumor agents
Antiviral agents
Cytotoxicity
Human
PCR (polymerase chain reaction)
West Nile virus
(prepn. of modified nucleosides for treatment of viral infections and abnormal cellular proliferation)
- IT Nucleosides, preparation
RL: IMF (Industrial manufacture); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of modified nucleosides for treatment of viral infections and abnormal cellular proliferation)
- IT Bovine diarrhea virus
Flaviviridae
Hepatitis C virus
Influenza A virus
Influenza B virus
Orthomyxoviridae
Paramyxoviridae
(treatment; prepn. of modified nucleosides for treatment of viral infections and abnormal cellular proliferation)
- IT Infection
(viral, treatment; prepn. of modified nucleosides for treatment of viral infections and abnormal cellular proliferation)
- IT 50-91-9P 73-03-0P 131-06-6P 147-94-4P
316-46-1P 727-79-7P 957-77-7P 1445-07-4P 1826-95-5P
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 415705-60-1P 415705-61-2P 415705-62-3P 415705-63-4P 415705-64-5P
 415705-65-6P 415705-66-7P 415705-67-8P 415705-68-9P 415705-69-0P
 415705-70-3P 415705-71-4P 415705-72-5P 415705-73-6P 415705-74-7P
 415705-75-8P 415705-77-0P 415705-78-1P

RL: IMF (Industrial manufacture); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of modified nucleosides for treatment of viral infections and abnormal cellular proliferation)

IT 415705-79-2P 415705-80-5P 415705-81-6P 415705-82-7P 415705-83-8P
 415705-84-9P 415705-85-0P 415705-86-1P 415705-87-2P 415705-88-3P
 415705-89-4P 415705-90-7P 415705-92-9P 415705-94-1P 415705-96-3P
 415705-97-4P 415705-98-5P 415705-99-6P 415706-00-2P 415706-01-3P
 415707-26-5P 415707-27-6P 415707-28-7P 415927-02-5P 415927-03-6P
 415927-04-7P

RL: IMF (Industrial manufacture); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of modified nucleosides for treatment of viral infections and abnormal cellular proliferation)

IT 2627-64-7P 3258-02-4P **3803-28-9P** 4710-75-2P 7057-27-4P
 7057-33-2P **14057-25-1P** 18829-83-9P 22855-06-7P 24514-26-9P
 25383-84-0P 37731-72-9P 38642-28-3P 52482-84-5P 52482-85-6P
 54937-38-1P 56889-16-8P 67036-63-9P 114861-14-2P 128496-21-9P
 161110-11-8P 175470-46-9P 223596-32-5P 405095-81-0P 405095-82-1P
 405095-83-2P 405095-84-3P 415704-28-8P 415704-29-9P 415704-30-2P
 415704-32-4P 415704-33-5P 415704-34-6P 415704-35-7P 415704-36-8P
 415704-37-9P 415704-38-0P 415704-40-4P 415704-41-5P 415704-43-7P
 415704-44-8P 415704-45-9P 415704-46-0P 415704-47-1P 415704-48-2P

RL: IMF (Industrial manufacture); **RCT (Reactant)**; SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**

(prepn. of modified nucleosides for treatment of viral infections and abnormal cellular proliferation)

IT 51-21-8, 5-Fluorouracil 58-61-7, Adenosine, reactions **58-96-8**,
 Uridine 65-71-4, Thymine 87-42-3, 6-Chloropurine 1005-56-7, Phenyl
 chlorothionoformate 3106-03-4, 5-Nitrouridine 3768-18-1 5432-33-7
 6553-96-4, 2,4,6-Triisopropylbenzenesulfonyl chloride 10526-27-9

20031-21-4 42927-46-8 128114-98-7 223596-25-6 415704-42-6

RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of modified nucleosides for treatment of viral infections and abnormal cellular proliferation)

IT 417196-37-3 417196-38-4 417196-39-5 417196-40-8 417196-41-9
417196-42-0

RL: PRP (Properties)

(unclaimed sequence; prepn. of modified nucleosides for treatment of viral infections and abnormal cellular proliferation)

IT 50-91-9P 131-06-6P 147-94-4P 316-46-1P

2341-22-2P 3066-86-2P 4298-10-6P

10212-19-8P 17676-66-3P 27921-78-4P

32791-81-4P 57729-40-5P 58461-30-6P

58461-34-0P 77180-78-0P 77210-26-5P

77210-27-6P 83966-93-2P 374107-80-9P

415704-56-2P 415704-57-3P 415704-62-0P

415704-64-2P 415704-70-0P 415704-81-3P

415704-82-4P 415704-89-1P 415704-90-4P

415704-91-5P

RL: IMF (Industrial manufacture); PAC (Pharmacological activity); SPN

(Synthetic preparation); THU (Therapeutic use); BIOL (Biological study);

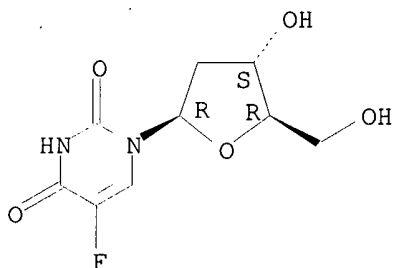
PREP (Preparation); USES (Uses)

(prepn. of modified nucleosides for treatment of viral infections and abnormal cellular proliferation)

RN 50-91-9 HCAPLUS

CN Uridine, 2'-deoxy-5-fluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

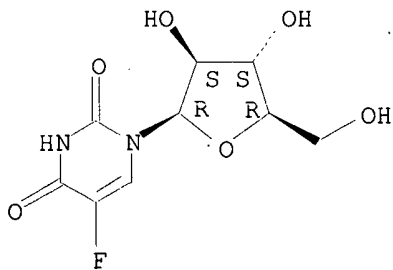
Absolute stereochemistry.



RN 131-06-6 HCAPLUS

CN 2,4(1H,3H)-Pyrimidinedione, 1-.beta.-D-arabinofuranosyl-5-fluoro- (9CI)
(CA INDEX NAME)

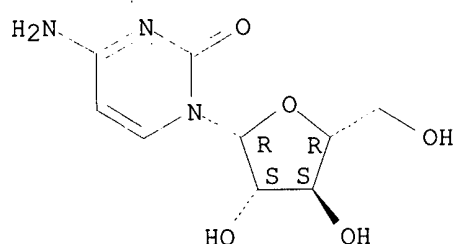
Absolute stereochemistry.



RN 147-94-4 HCAPLUS

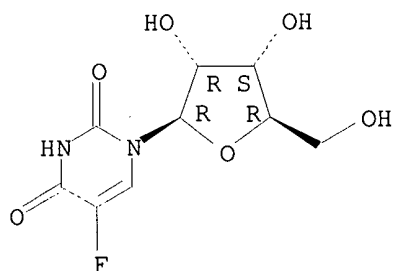
CN 2(1H)-Pyrimidinone, 4-amino-1-.beta.-D-arabinofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



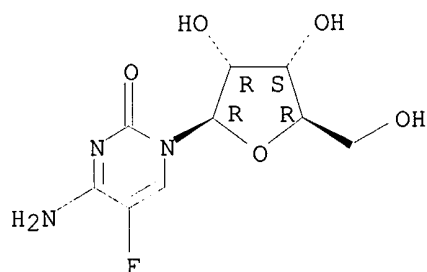
RN 316-46-1 HCAPLUS
CN Uridine, 5-fluoro- (6CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



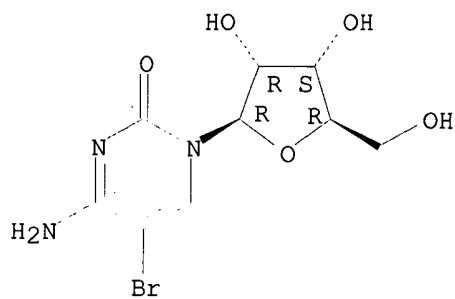
RN 2341-22-2 HCAPLUS
CN Cytidine, 5-fluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 3066-86-2 HCAPLUS
CN Cytidine, 5-bromo- (7CI, 8CI, 9CI) (CA INDEX NAME)

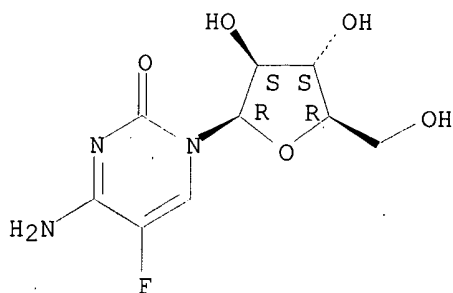
Absolute stereochemistry.



RN 4298-10-6 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-1-.beta.-D-arabinofuranosyl-5-fluoro- (9CI)
(CA INDEX NAME)

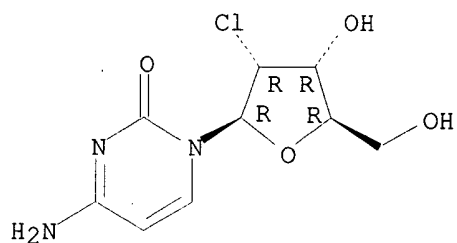
Absolute stereochemistry.



RN 10212-19-8 HCAPLUS

CN Cytidine, 2'-chloro-2'-deoxy- (8CI, 9CI) (CA INDEX NAME)

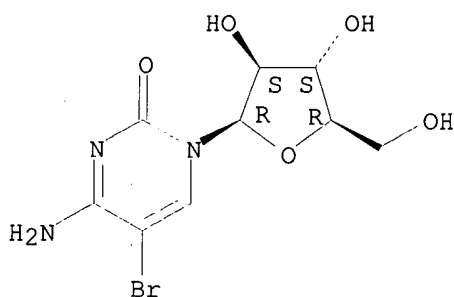
Absolute stereochemistry.



RN 17676-66-3 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-1-.beta.-D-arabinofuranosyl-5-bromo- (9CI)
(CA INDEX NAME)

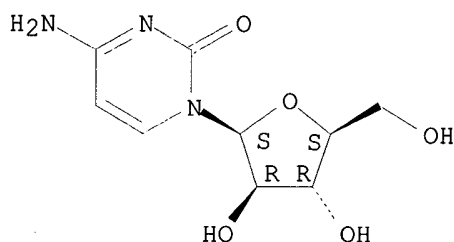
Absolute stereochemistry.



RN 27921-78-4 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-1-.beta.-L-arabinofuranosyl- (9CI) (CA INDEX NAME)

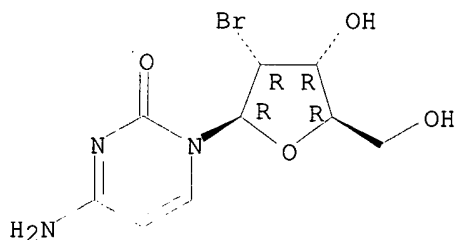
Absolute stereochemistry. Rotation (-).



RN 32791-81-4 HCAPLUS

CN Cytidine, 2'-bromo-2'-deoxy- (8CI, 9CI) (CA INDEX NAME)

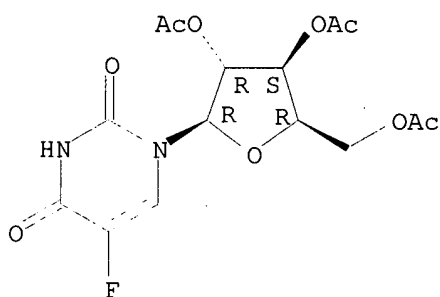
Absolute stereochemistry.



RN 57729-40-5 HCAPLUS

CN 2,4(1H,3H)-Pyrimidinedione, 5-fluoro-1-(2,3,5-tri-O-acetyl-.beta.-D-xylofuranosyl)- (9CI) (CA INDEX NAME)

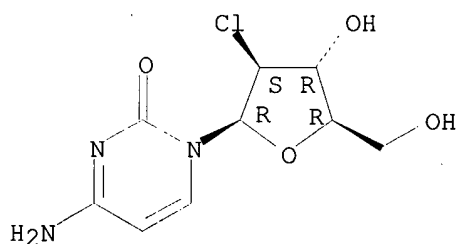
Absolute stereochemistry.



RN 58461-30-6 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-1-(2-chloro-2-deoxy-.beta.-D-arabinofuranosyl)-
(9CI) (CA INDEX NAME)

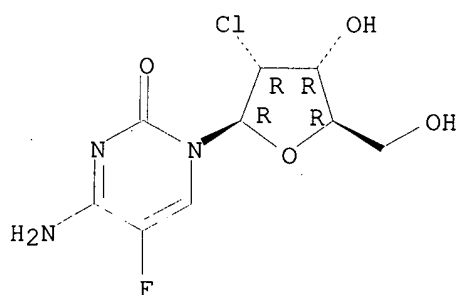
Absolute stereochemistry.



RN 58461-34-0 HCAPLUS

CN Cytidine, 2'-chloro-2'-deoxy-5-fluoro- (9CI) (CA INDEX NAME)

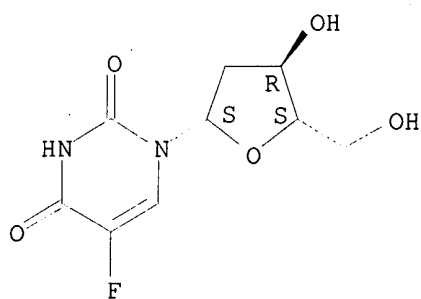
Absolute stereochemistry.



RN 77180-78-0 HCAPLUS

CN 2,4(1H,3H)-Pyrimidinedione, 1-(2-deoxy-.beta.-L-erythro-pentofuranosyl)-5-fluoro- (9CI) (CA INDEX NAME)

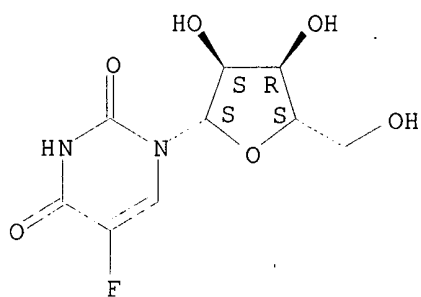
Absolute stereochemistry. Rotation (-).



RN 77210-26-5 HCAPLUS

CN 2,4(1H,3H)-Pyrimidinedione, 5-fluoro-1-.beta.-L-ribofuranosyl- (9CI) (CA INDEX NAME)

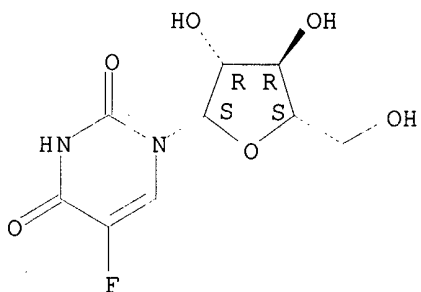
Absolute stereochemistry. Rotation (-).



RN 77210-27-6 HCAPLUS

CN 2,4(1H,3H)-Pyrimidinedione, 1-.beta.-L-arabinofuranosyl-5-fluoro- (9CI) (CA INDEX NAME)

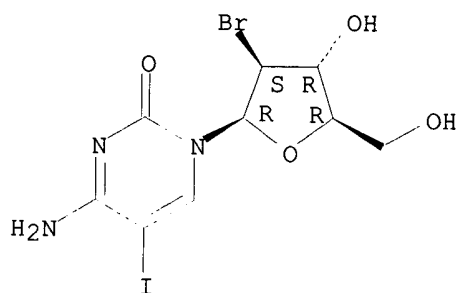
Absolute stereochemistry. Rotation (-).



RN 83966-93-2 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-1-(2-bromo-2-deoxy-.beta.-D-arabinofuranosyl)-5-iodo- (9CI) (CA INDEX NAME)

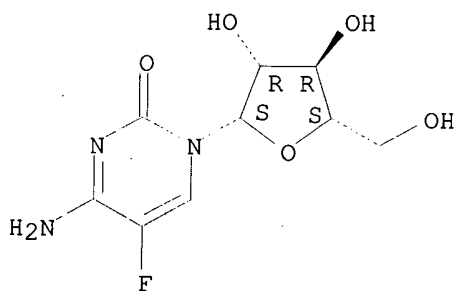
Absolute stereochemistry.



RN 374107-80-9 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-1-β-L-arabinofuranosyl-5-fluoro- (9CI)
(CA INDEX NAME)

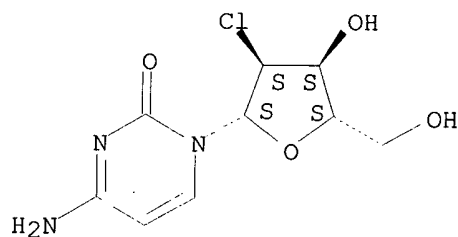
Absolute stereochemistry. Rotation (-).



RN 415704-56-2 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-1-(2-chloro-2-deoxy-β-L-ribofuranosyl)-
(9CI) (CA INDEX NAME)

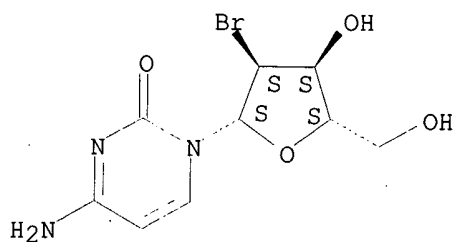
Absolute stereochemistry.



RN 415704-57-3 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-1-(2-bromo-2-deoxy-β-L-ribofuranosyl)-
(9CI) (CA INDEX NAME)

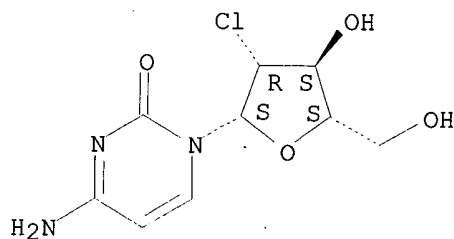
Absolute stereochemistry.



RN 415704-62-0 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-1-(2-chloro-2-deoxy-.beta.-L-arabinofuranosyl)- (9CI) (CA INDEX NAME)

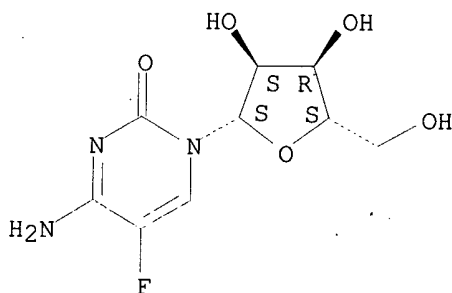
Absolute stereochemistry.



RN 415704-64-2 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-5-fluoro-1-.beta.-L-ribofuranosyl- (9CI) (CA INDEX NAME)

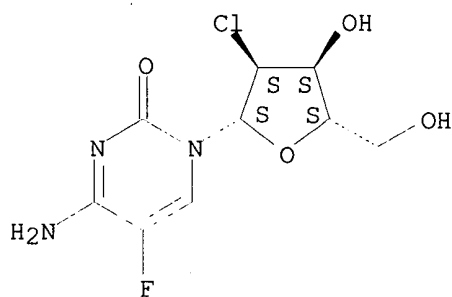
Absolute stereochemistry.



RN 415704-70-0 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-1-(2-chloro-2-deoxy-.beta.-L-ribofuranosyl)-5-fluoro- (9CI) (CA INDEX NAME)

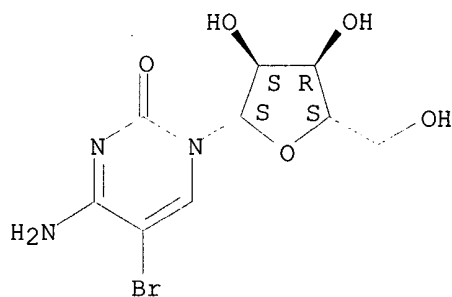
Absolute stereochemistry.



RN 415704-81-3 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-5-bromo-1-.beta.-L-ribofuranosyl- (9CI) (CA INDEX NAME)

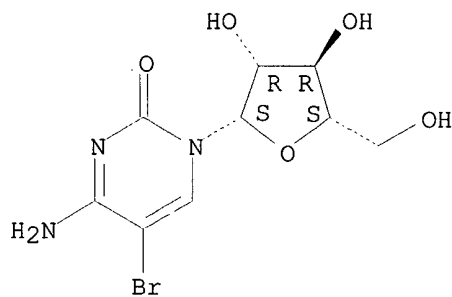
Absolute stereochemistry.



RN 415704-82-4 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-1-.beta.-L-arabinofuranosyl-5-bromo- (9CI) (CA INDEX NAME)

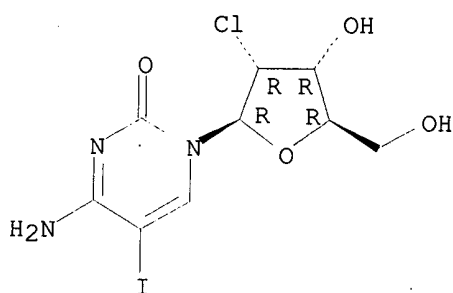
Absolute stereochemistry.



RN 415704-89-1 HCAPLUS

CN Cytidine, 2'-chloro-2'-deoxy-5-iodo- (9CI) (CA INDEX NAME)

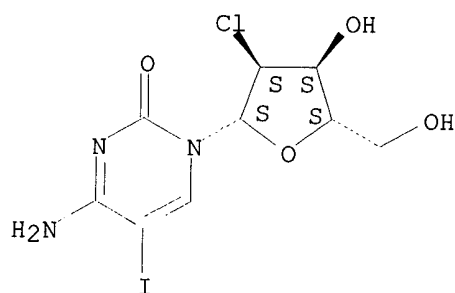
Absolute stereochemistry.



RN 415704-90-4 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-1-(2-chloro-2-deoxy-.beta.-L-ribofuranosyl)-5-iodo- (9CI) (CA INDEX NAME)

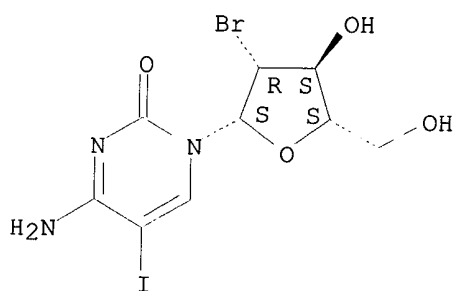
Absolute stereochemistry.



RN 415704-91-5 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-1-(2-bromo-2-deoxy-.beta.-L-arabinofuranosyl)-5-iodo- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



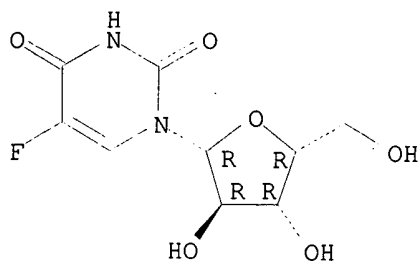
IT 3803-28-9P 14057-25-1P

RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (prepn. of modified nucleosides for treatment of viral infections and abnormal cellular proliferation)

RN 3803-28-9 HCAPLUS

CN 2,4(1H,3H)-Pyrimidinedione, 5-fluoro-1-.beta.-D-xylofuranosyl- (9CI) (CA INDEX NAME)

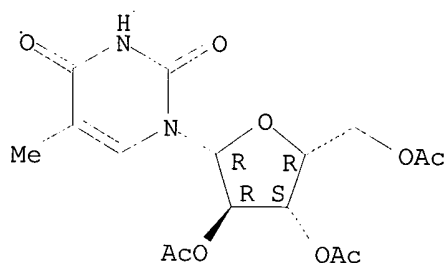
Absolute stereochemistry.



RN 14057-25-1 HCAPLUS

CN 2,4(1H,3H)-Pyrimidinedione, 5-methyl-1-(2,3,5-tri-O-acetyl-.beta.-D-xylofuranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 58-96-8, Uridine

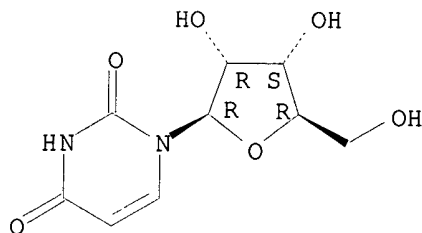
RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of modified nucleosides for treatment of viral infections and abnormal cellular proliferation)

RN 58-96-8 HCAPLUS

CN Uridine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L75 ANSWER 2 OF 30 HCAPLUS COPYRIGHT 2003 ACS

AN 2002:180164 HCAPLUS

DN 137:47389

TI Synthesis of N4-alkyl-5-methyl-2'-deoxycytidine

AU Yu, Jianxin; Zhang, Wannian; Zhu, Ju; Lu, Jiaguo; Li, Ke

CS Department of Pharmacy, Second Military Medical University, Shanghai, 200433, Peop. Rep. China

SO Zhongguo Yiyao Gongye Zazhi (2001), 32(12), 547-549

CODEN: ZYGZEA; ISSN: 1001-8255

PB Zhongguo Yiyao Gongye Zazhi Bianjibu

DT Journal

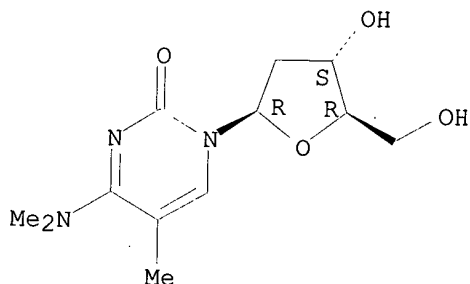
LA Chinese

CC 33-9 (Carbohydrates)

OS CASREACT 137:47389

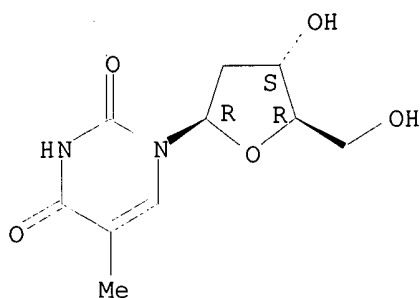
- AB A series of new N4-alkyl-5-methyl-2'-deoxytidines were synthesized by displacement of triazole group at C4 of 1-(3',5'- O-dibenzoyl-.beta.-D-ribofuranosyl)-4-(1,2,4-triazol-1-yl)-5-methyl-pyrimidin-2(1H)-one, which was obtained by condensation of 3',5'-O-dibenzoylthymidine with 1,2,4-triazole in the presence of POCl₃.
- ST alkyl methyldeoxycytidine prepn substitution reaction
- IT Heterocyclic compounds
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (nitrogen; synthesis of N4-alkyl-5-methyl-2'-deoxycytidine)
- IT Substitution reaction
 (synthesis of N4-alkyl-5-methyl-2'-deoxycytidine)
- IT Nucleosides, preparation
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (synthesis of N4-alkyl-5-methyl-2'-deoxycytidine)
- IT 10025-87-3, Phosphoric trichloride
 RL: CAT (Catalyst use); USES (Uses)
 (synthesis of N4-alkyl-5-methyl-2'-deoxycytidine)
- IT 75-31-0, Isopropyl **amine**, reactions 98-88-4, Benzoyl chloride.
 104-94-9, 4-Methoxyphenyl **amine** 107-11-9, Allyl **amine**
25406-45-5
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (synthesis of N4-alkyl-5-methyl-2'-deoxycytidine)
- IT **50-89-5P**, Thymidine, preparation 288-88-0P, 1H-1,2,4-Triazole
 78138-02-0P 438588-33-1P 438588-41-1P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (synthesis of N4-alkyl-5-methyl-2'-deoxycytidine)
- IT **25406-43-3P 25406-44-4P** 104579-02-4P
438588-38-6P 438588-39-7P 438588-40-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (synthesis of N4-alkyl-5-methyl-2'-deoxycytidine)
- IT **25406-45-5**
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (synthesis of N4-alkyl-5-methyl-2'-deoxycytidine)
- RN **25406-45-5** HCAPLUS
- CN Cytidine, 2'-deoxy-N,N,5-trimethyl- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



- IT **50-89-5P**, Thymidine, preparation
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (synthesis of N4-alkyl-5-methyl-2'-deoxycytidine)
- RN **50-89-5** HCAPLUS
- CN Thymidine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



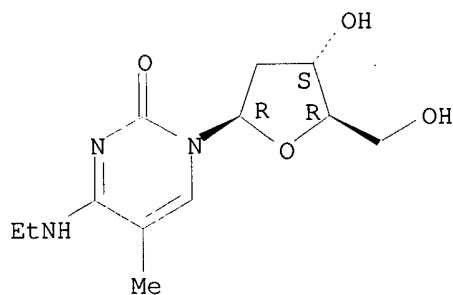
IT 25406-43-3P 25406-44-4P 438588-38-6P
438588-39-7P 438588-40-0P

RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of N4-alkyl-5-methyl-2'-deoxycytidine)

RN 25406-43-3 HCAPLUS

CN Cytidine, 2'-deoxy-N-ethyl-5-methyl- (8CI, 9CI) (CA INDEX NAME)

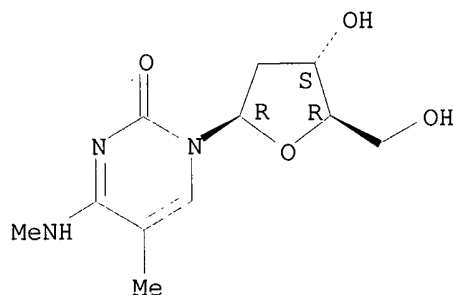
Absolute stereochemistry.



RN 25406-44-4 HCAPLUS

CN Cytidine, 2'-deoxy-N,5-dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

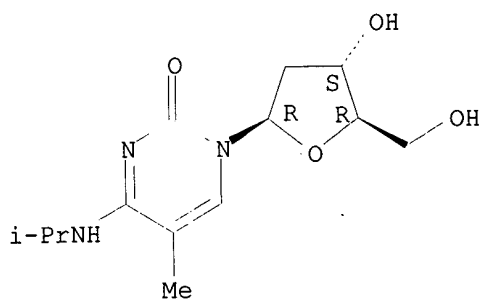
Absolute stereochemistry.



RN 438588-38-6 HCAPLUS

CN Cytidine, 2'-deoxy-5-methyl-N-(1-methylethyl)- (9CI) (CA INDEX NAME)

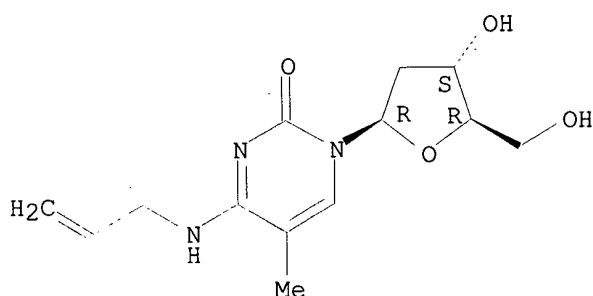
Absolute stereochemistry.



RN 438588-39-7 HCAPLUS

CN Cytidine, 2'-deoxy-5-methyl-N-2-propenyl- (9CI) (CA INDEX NAME)

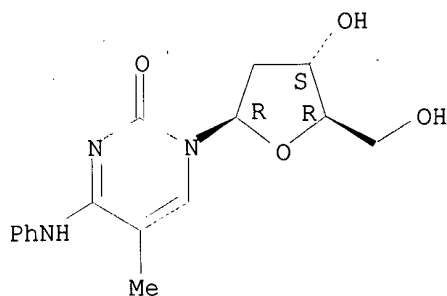
Absolute stereochemistry.



RN 438588-40-0 HCAPLUS

CN Cytidine, 2'-deoxy-5-methyl-N-phenyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L75 ANSWER 3 OF 30 HCAPLUS COPYRIGHT 2003 ACS

AN 1998:251183 HCAPLUS

DN 128:321868

TI Improved coupling activators for oligonucleotide synthesis

IN Vargeese, Chandra; Pieken, Wolfgang; Carter, Jeffrey D.; Yegge, John

PA Nexstar Pharmaceuticals, Inc., USA; Vargeese, Chandra; Pieken, Wolfgang; Carter, Jeffrey D.; Yegge, John

SO PCT Int. Appl., 50 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C07H021-00

ICS C07H021-04; C07H001-00
CC 33-10 (Carbohydrates)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9816540	A1	19980423	WO 1997-US15744	19971008 <--
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9748001	A1	19980511	AU 1997-48001	19971008 <--
PRAI	US 1996-730556		19961015 <--		
	US 1997-937867		19970925 <--		
	WO 1997-US15744		19971008 <--		
AB	A method for coupling phosphoramidite monomers with nucleophiles, for example, the 5'-hydroxyl group on the growing oligonucleotide chain, using a coupling activator that is less acidic than and at least as nucleophilic as tetrazole and that provides comparable or better coupling efficiency than tetrazole. The pKa of the coupling activator is between 5.0 and 6.0, preferably between 5.0 and 5.5, and, more preferably, between 5.1 and 5.3. Suitable coupling activators include 4,5-dicyanoimidazole (DCI), 4-alkylthioimidazole, 2-alkylthioimidazole, 2-nitroimidazole, 4-nitroimidazole, 4,5-dihaloimidazole, 4-haloimidazole, 2-haloimidazole and 5-alkoxytetrazole. DCI is the most preferred coupling activator. Alternatively, a combination of an acidic coupling activator and a suitable buffer, such as a tertiary amine, can be employed. The tertiary amine can be a tertiary amine with three alkyl groups or a heterocyclic compd. contg. one or more tertiary amines. Preferably the tertiary amine is less nucleophilic than DMAP, which is known to cause side reactions at the 6-position oxygen of guanosines due to its relatively high nucleophilicity. N-methylimidazole (NMI) is the preferred tertiary amine.				
ST	oligodeoxyribonucleotide synthesis coupling activator imidazole				
IT	Oligodeoxyribonucleotides				
	RL: SPN (Synthetic preparation); PREP (Preparation) (improved imidazole coupling activators for oligodeoxyribonucleotide synthesis)				
IT	Coupling reaction (improved imidazole coupling activators for oligonucleotide synthesis)				
IT	98796-51-1P RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (improved imidazole coupling activators for oligonucleotide synthesis)				
IT	10212-20-1P 205454-24-6P 205454-25-7P 205454-26-8P 205454-27-9P 206887-59-4P 206887-60-7P RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation) (improved imidazole coupling activators for oligonucleotide synthesis)				
IT	1122-28-7P, 1H-Imidazole-4,5-dicarbonitrile RL: PUR (Purification or recovery); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent) (improved imidazole coupling activators for oligonucleotide synthesis)				
IT	288-94-8, 1H-Tetrazole 616-47-7, N-Methylimidazole 10212-13-2 RL: RCT (Reactant); RACT (Reactant or reagent) (improved imidazole coupling activators for oligonucleotide synthesis)				
RE.CNT	1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD				
RE					
(1)	Reddy; US 5574146 A 1996 HCAPLUS				

IT 10212-20-1P

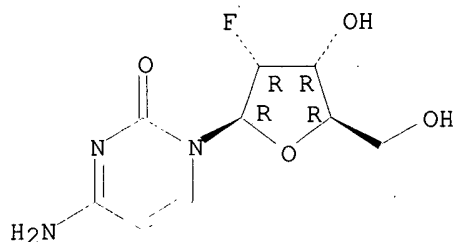
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(improved imidazole coupling activators for oligonucleotide synthesis)

RN 10212-20-1 HCAPLUS

CN Cytidine, 2'-deoxy-2'-fluoro- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 10212-13-2

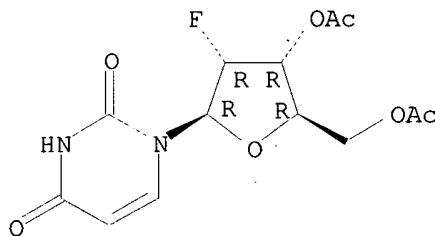
RL: RCT (Reactant); RACT (Reactant or reagent)

(improved imidazole coupling activators for oligonucleotide synthesis)

RN 10212-13-2 HCAPLUS

CN Uridine, 2'-deoxy-2'-fluoro-, 3',5'-diacetate (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L75 ANSWER 4 OF 30 HCAPLUS COPYRIGHT 2003 ACS

AN 1997:259665 HCAPLUS

DN 126:277718

TI One-pot synthesis of 4-aminopyrimidine nucleoside from 4-hydroxypyrimidine nucleoside

IN Mori, Takeya

PA Yamasa Shoyu Kk, Japan

SO Jpn. Kokai Tokkyo Koho, 3 pp.

CODEN: JKXXAF

DT Patent

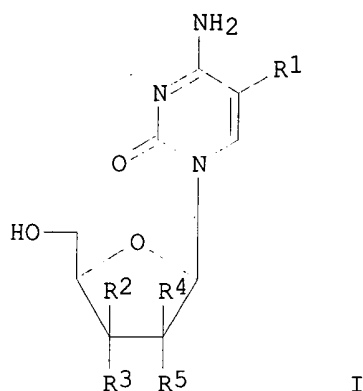
LA Japanese

IC ICM C07H019-06

CC 33-9 (Carbohydrates)

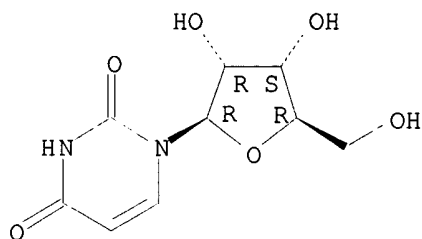
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09059292	A2	19970304	JP 1995-240927	19950825 <--
PRAI	JP 1995-240927		19950825 <--		
OS	CASREACT 126:277718; MARPAT 126:277718				
GI					



- AB The title compds. (I; R1 = H, lower alkyl, halo; R2 - R5 = H, OH) are prepd. by protecting hydroxy groups of 4-hydroxypyrimidine nucleosides (II; R1 - R5 = same as above) with trimethylsilyl group and subsequent reaction with phosphorus oxychloride or 4-chlorophenyl phosphorodichloridate and **amination** with aq. NH3 without isolating the resulting intermediate. The procedures of this process are simpler than those of prior art and the reaction can be carried out under mild conditions in one pot. Thus, 5.1 mL trimethylsilyl chloride was added to a soln. of 2.44 g uridine in 50 mL pyridine, stirred at room temp. for 1 h, followed by adding 2 mL POCl3, and the resulting mixt. was stirred at room temp. for 4 h. To the reaction mixt. was added 5 mL ice-cooled H2O at 0.degree. and after stirring the mixt. for 30 min, 20 mL 25 aq. NH3 was added and stirred at 50.degree. for 2 h to give, after purifn. using ion exchange resin PK216, 83.9% cytidine. Similarly prepd. were 5-methylcytidine and 5-bromocytidine from 5-methyluridine and 5-bromouridine, resp.
- ST aminopyrimidine nucleoside one pot prepn; hydroxypyrimidine nucleoside **amination**; phosphorus oxychloride condensation hydroxypyrimidine nucleoside; trimethylsilylation hydroxypyrimidine nucleoside
- IT Pyrimidine nucleosides
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (One-pot synthesis of aminopyrimidine nucleosides from hydroxypyrimidine nucleosides)
- IT **58-96-8**, Uridine **75-77-4**, Trimethylsilyl chloride, reactions **772-79-2**, 4-Chlorophenyl phosphorodichloridate **957-75-5**, 5-Bromouridine **1463-10-1**, 5-Methyluridine **7664-41-7**, Ammonia, reactions **10025-87-3**, Phosphorus oxychloride
 RL: **RCT (Reactant)**; **RACT (Reactant or reagent)**
 (One-pot synthesis of aminopyrimidine nucleosides from hydroxypyrimidine nucleosides)
- IT **65-46-3P**, Cytidine **2140-61-6P**, 5-Methylcytidine **3066-86-2P**, 5-Bromocytidine
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (One-pot synthesis of aminopyrimidine nucleosides from hydroxypyrimidine nucleosides)
- IT **58-96-8**, Uridine **957-75-5**, 5-Bromouridine **1463-10-1**, 5-Methyluridine
 RL: **RCT (Reactant)**; **RACT (Reactant or reagent)**
 (One-pot synthesis of aminopyrimidine nucleosides from hydroxypyrimidine nucleosides)
- RN **58-96-8** HCAPLUS
- CN Uridine (8CI, 9CI) (CA INDEX NAME)

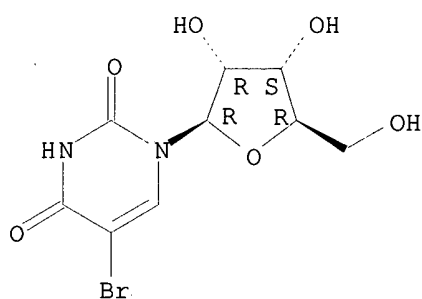
Absolute stereochemistry.



RN 957-75-5 HCAPLUS

CN Uridine, 5-bromo- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

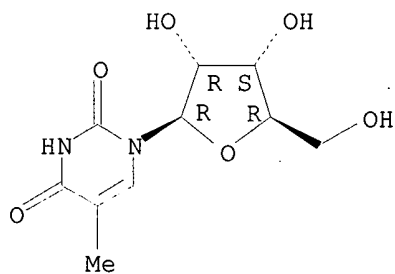
Absolute stereochemistry. Rotation (-).



RN 1463-10-1 HCAPLUS

CN Uridine, 5-methyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 65-46-3P, Cytidine 2140-61-6P, 5-Methylcytidine

3066-86-2P, 5-Bromocytidine

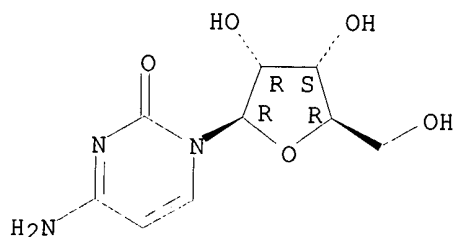
RL: SPN (Synthetic preparation); PREP (Preparation)

(One-pot synthesis of aminopyrimidine nucleosides from
hydroxypyrimidine nucleosides)

RN 65-46-3 HCAPLUS

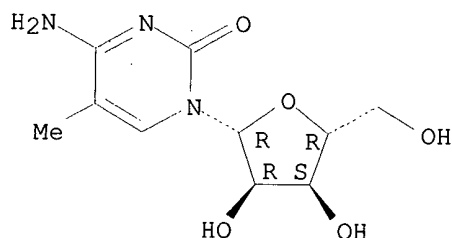
CN Cytidine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



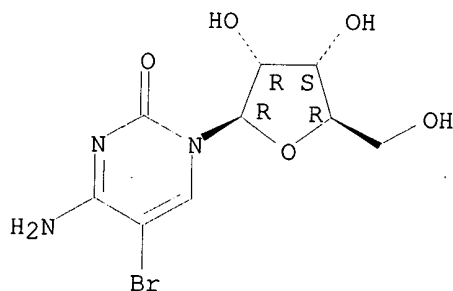
RN 2140-61-6 HCAPLUS
 CN Cytidine, 5-methyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

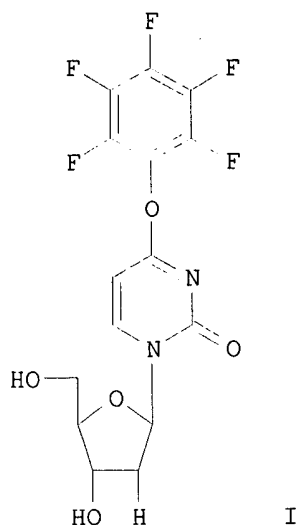


RN 3066-86-2 HCAPLUS
 CN Cytidine, 5-bromo- (7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

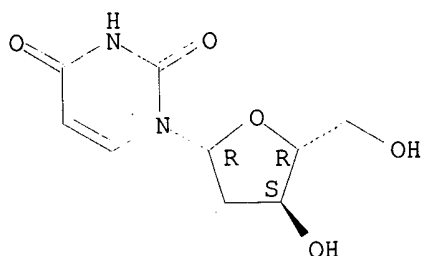


L75 ANSWER 5 OF 30 HCAPLUS COPYRIGHT 2003 ACS
 AN 1995:614105 HCAPLUS
 DN 123:314326
 TI Direct synthesis, substitution, and structure of 1-(2'-deoxy-β-D-erythro-pentofuranosyl)-4-pentafluorophenylpyrimidin-2H-one
 AU Wallis, Mark P.; Spiers, Ian D.; Schwalbe, Carl H.; Fraser, William
 CS Pharmaceutical Sci. Inst., Aston Univ., Birmingham, B4 7ET, UK
 SO Tetrahedron Letters (1995), 36(21), 3759-62
 CODEN: TELEAY; ISSN: 0040-4039
 PB Elsevier
 DT Journal
 LA English
 CC 33-9 (Carbohydrates)
 GI



- AB Direct methods have been developed to access the title nucleoside I from 2'-deoxyuridine. The C-4 pentafluorophenyl group of I is readily displaced by **amine** nucleophiles forming N-4 substituted cytosines in good to excellent yields.
- ST **amine** nucleophilic substitution pentafluorophenylpyrimidinone nucleoside; nucleoside pentafluorophenylpyrimidinone prepn mol structure; deoxypentofuranosyl pentafluorophenylpyrimidinone prepn mol structure
- IT Substitution reaction, nucleophilic
(synthesis and substitution and mol. structure of deoxypentofuranosyl pentafluorophenylpyrimidinone)
- IT Nucleosides, preparation
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis and substitution and mol. structure of deoxypentofuranosyl pentafluorophenylpyrimidinone)
- IT 64-04-0, Benzeneethanamine 589-08-2, N-MethylBenzeneethanamine 771-61-9, Pentafluorophenol. **951-78-0**, 2'-Deoxyuridine 83392-10-3
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(synthesis and substitution and mol. structure of deoxypentofuranosyl pentafluorophenylpyrimidinone)
- IT **109389-24-4P** 170114-35-9P 170114-39-3P 170114-41-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis and substitution and mol. structure of deoxypentofuranosyl pentafluorophenylpyrimidinone)
- IT **104105-76-2P** 170114-36-0P 170114-37-1P 170114-38-2P 170114-40-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis and substitution and mol. structure of deoxypentofuranosyl pentafluorophenylpyrimidinone)
- IT **951-78-0**, 2'-Deoxyuridine
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(synthesis and substitution and mol. structure of deoxypentofuranosyl pentafluorophenylpyrimidinone)
- RN 951-78-0 HCAPLUS
- CN Uridine, 2'-deoxy- (6CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



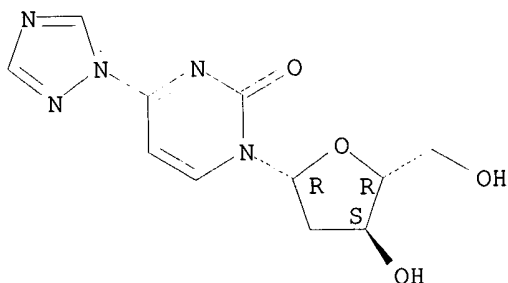
IT 109389-24-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis and substitution and mol. structure of deoxypentofuranosyl pentafluorophenylpyrimidinone)

RN 109389-24-4 HCAPLUS

CN 2(1H)-Pyrimidinone, 1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-4-(1H-1,2,4-triazol-1-yl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



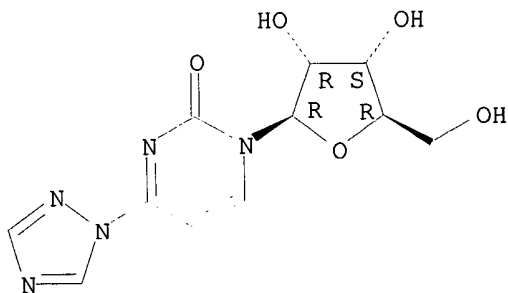
IT 104105-76-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis and substitution and mol. structure of deoxypentofuranosyl pentafluorophenylpyrimidinone)

RN 104105-76-2 HCAPLUS

CN 2(1H)-Pyrimidinone, 1-.beta.-D-ribofuranosyl-4-(1H-1,2,4-triazol-1-yl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L75 ANSWER 6 OF 30 HCAPLUS COPYRIGHT 2003 ACS

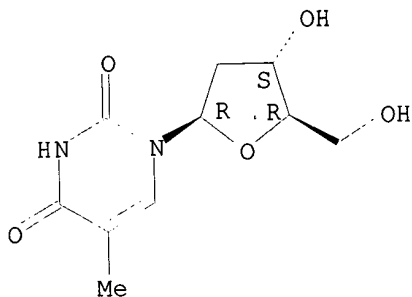
AN 1995:224840 HCAPLUS

DN 122:240302

TI A new and efficient synthesis of cytidine and adenosine derivatives by dimethyldioxirane oxidation of thiopyrimidine and thiopurine nucleosides

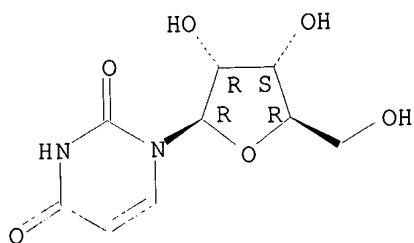
AU Saladino, Raffaele; Crestini, Claudia; Bernini, Roberta; Frachey, Giuseppe; Mincione, Enrico
CS Dipartimento Agrochimico Agrobiologico, Universita degli studi di Viterbo
La Tuscia, Viterbo, 01100, Italy
SO Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1994), (21), 3053-4
CODEN: JCPRB4; ISSN: 0300-922X
PB Royal Society of Chemistry
DT Journal
LA English
CC 33-9 (Carbohydrates)
OS CASREACT 122:240302
AB Dimethyldioxirane oxidn. of thiopyrimidine and thiopurine nucleosides, in the presence of **amines** in stoichiometric amt., afforded selectively and under mild exptl. conditions cytidine and adenosine nucleosides.
ST thiopurine nucleoside stereoselective oxidn dimethyldioxirane;
IT dimethyldioxirane stereoselective oxidn thiopyrimidine nucleoside
Oxidation
Stereochimistry
(synthesis of cytidine and adenosine derivs. by dimethyldioxirane oxidn. of thiopyrimidine and thiopurine nucleosides)
IT Nucleosides, preparation
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of cytidine and adenosine derivs. by dimethyldioxirane oxidn. of thiopyrimidine and thiopurine nucleosides)
IT 50-89-5, Thymidine, reactions 58-96-8, Uridine
951-78-0 3021-21-4 153336-41-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of cytidine and adenosine derivs. by dimethyldioxirane oxidn. of thiopyrimidine and thiopurine nucleosides)
IT 7387-57-7P 20188-74-3P 55003-25-3P 56787-28-1P
65919-98-4P 103931-23-3P 111426-20-1P
115652-25-0P 162210-81-3P 162210-82-4P 162210-85-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of cytidine and adenosine derivs. by dimethyldioxirane oxidn. of thiopyrimidine and thiopurine nucleosides)
IT 58-61-7P, Adenosine, preparation 65-46-3P, Cytidine
838-07-3P 951-77-9P 2096-10-8P 10578-79-7P
162210-83-5P 162210-84-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of cytidine and adenosine derivs. by dimethyldioxirane oxidn. of thiopyrimidine and thiopurine nucleosides)
IT 50-89-5, Thymidine, reactions 58-96-8, Uridine
951-78-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of cytidine and adenosine derivs. by dimethyldioxirane oxidn. of thiopyrimidine and thiopurine nucleosides)
RN 50-89-5 HCAPLUS
CN Thymidine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



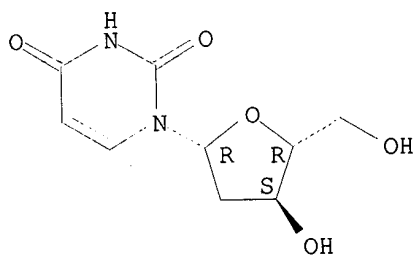
RN 58-96-8 HCAPLUS
CN Uridine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



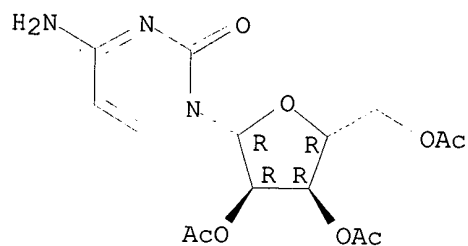
RN 951-78-0 HCAPLUS
CN Uridine, 2'-deoxy- (6CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 56787-28-1P 65919-98-4P 111426-20-1P
115652-25-0P 162210-81-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(synthesis of cytidine and adenosine derivs. by dimethyldioxirane
oxidn. of thiopyrimidine and thiopurine nucleosides)
RN 56787-28-1 HCAPLUS
CN Cytidine, 2',3',5'-triacetate (7CI, 9CI) (CA INDEX NAME)

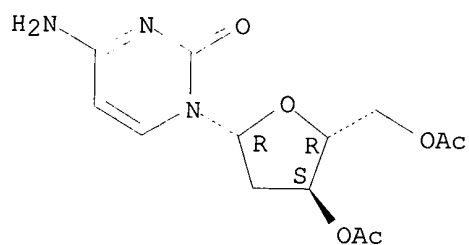
Absolute stereochemistry.



RN 65919-98-4 HCAPLUS

CN Cytidine, 2'-deoxy-, 3',5'-diacetate (9CI) (CA INDEX NAME)

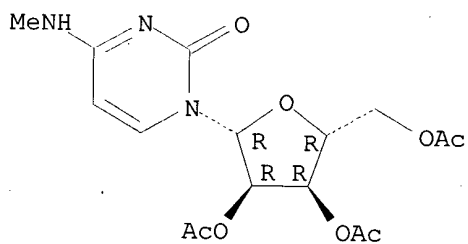
Absolute stereochemistry.



RN 111426-20-1 HCAPLUS

CN Cytidine, N-methyl-, 2',3',5'-triacetate (9CI) (CA INDEX NAME)

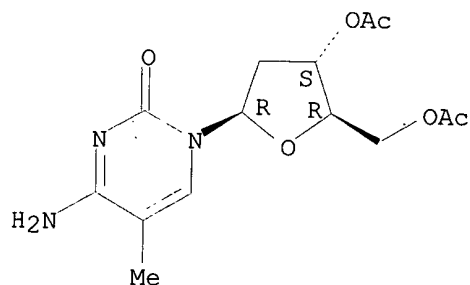
Absolute stereochemistry.



RN 115652-25-0 HCAPLUS

CN Cytidine, 2'-deoxy-5-methyl-, 3',5'-diacetate (9CI) (CA INDEX NAME)

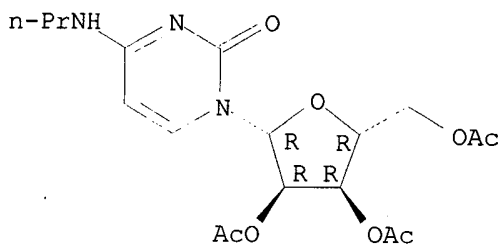
Absolute stereochemistry.



RN 162210-81-3 HCAPLUS

CN Cytidine, N-propyl-, 2',3',5'-triacetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



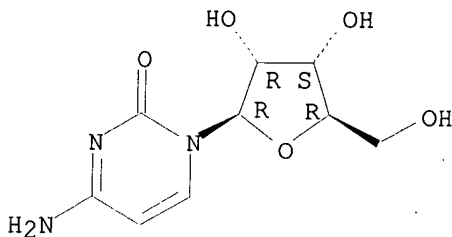
IT 65-46-3P, Cytidine 838-07-3P 951-77-9P
10578-79-7P 162210-83-5P

RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of cytidine and adenosine derivs. by dimethyldioxirane
oxidn. of thiopyrimidine and thiopurine nucleosides)

RN 65-46-3 HCAPLUS

CN Cytidine (8CI, 9CI) (CA INDEX NAME)

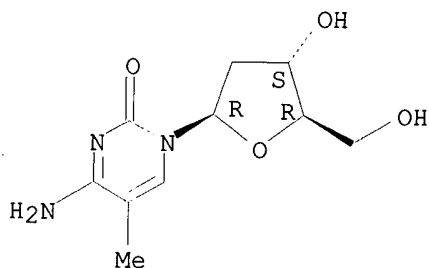
Absolute stereochemistry.



RN 838-07-3 HCAPLUS

CN Cytidine, 2'-deoxy-5-methyl- (6CI, 8CI, 9CI) (CA INDEX NAME)

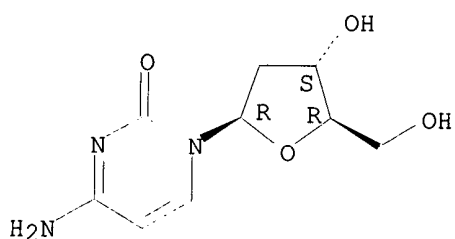
Absolute stereochemistry.



RN 951-77-9 HCAPLUS

CN Cytidine, 2'-deoxy- (8CI, 9CI) (CA INDEX NAME)

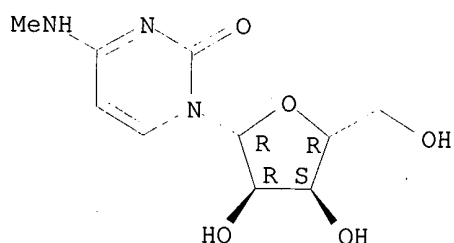
Absolute stereochemistry. Rotation (+).



RN 10578-79-7 HCAPLUS

CN Cytidine, N-methyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

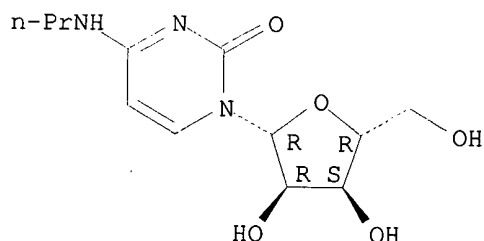
Absolute stereochemistry.



RN 162210-83-5 HCAPLUS

CN Cytidine, N-propyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L75 ANSWER 7 OF 30 HCAPLUS COPYRIGHT 2003 ACS

AN 1995:65930 HCAPLUS

DN 122:81860

TI Oxidation of nucleic acid related compounds by the peroxodisulfate ion

AU Itahara, Toshio; Yoshitake, Takashi; Koga, Sunao; Nishino, Akihiro

CS College Lib. Arts, Kagoshima Univ., Kagoshima, 890, Japan

SO Bulletin of the Chemical Society of Japan (1994), 67(8), 2257-64

CODEN: BCSJA8; ISSN: 0009-2673

DT Journal

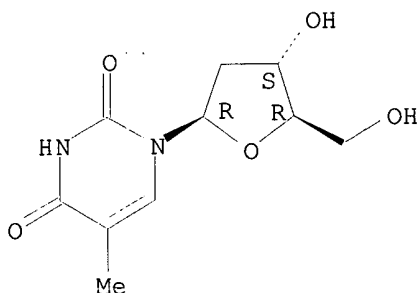
LA English

CC 33-9 (Carbohydrates)

AB The treatment of nucleic acid bases, nucleosides, and nucleotides with peroxodisulfate ion in a phosphate buffer soln. at pH 7.0 or water at 70-75 .degree.C was investigated. The reaction of thymine and 5-methylcytosine nucleosides and nucleotides resulted in the oxidn. of the 5-Me groups. The oxidn. products from 1,3-dimethyluracils and the time-course of the reaction of uracils led to two plausible reaction mechanisms for the oxidn. of uracils.

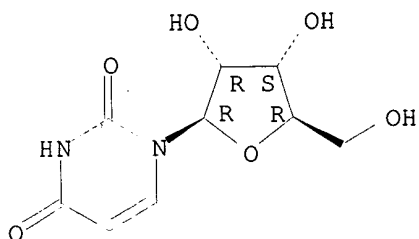
- ST nucleic acid oxidn peroxodisulfate; nucleobase oxidn peroxodisulfate;
nucleotide oxidn peroxodisulfate; nucleoside oxidn peroxodisulfate
- IT Nucleic acid bases
RL: RCT (Reactant); RACT (Reactant or reagent)
- IT Oxidation
(oxidn. of nucleic acid related compds. by the peroxodisulfate ion)
- IT Nucleosides, reactions
Nucleotides, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidn. of nucleic acid related compds. by the peroxodisulfate ion)
- IT **50-89-5**, Thymidine, reactions 58-61-7, Adenosine, reactions
58-96-8, Uridine **65-46-3**, Cytidine 66-22-8,
2,4(1H,3H)-Pyrimidinedione, reactions 71-30-7 73-24-5, 1H-Purin-6-
amine, reactions 874-14-6 **951-77-9 951-78-0**
958-09-8 3013-92-1 4401-71-2 7033-39-8 18531-27-6 61240-13-9
108320-84-9 108321-45-5 160509-67-1 160509-70-6 160509-76-2
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(oxidn. of nucleic acid related compds. by the peroxodisulfate ion)
- IT 137017-45-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(oxidn. of nucleic acid related compds. by the peroxodisulfate ion)
- IT 65-71-4P 120-89-8P, Imidazolidinetrione 132-00-3P **838-07-3P**
1123-95-1P 1195-08-0P 2835-45-2P 3106-18-1P 4425-59-6P
4433-40-3P 4494-26-2P 4869-46-9P 5116-24-5P 5176-82-9P
7226-77-9P 13509-52-9P 14181-46-5P 15718-50-0P 20406-86-4P
20636-41-3P 56070-36-1P 107097-10-9P 138610-55-6P 160509-68-2P
160509-69-3P 160509-71-7P 160509-72-8P 160509-73-9P 160509-74-0P
160509-75-1P 160509-77-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(oxidn. of nucleic acid related compds. by the peroxodisulfate ion)
- IT **50-89-5**, Thymidine, reactions **58-96-8**, Uridine
65-46-3, Cytidine **951-77-9 951-78-0**
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(oxidn. of nucleic acid related compds. by the peroxodisulfate ion)
- RN 50-89-5 HCAPLUS
CN Thymidine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



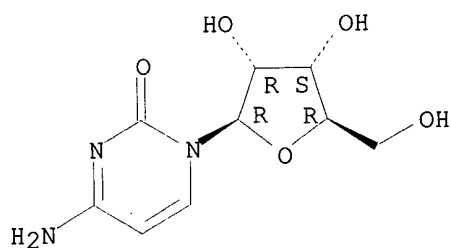
- RN 58-96-8 HCAPLUS
CN Uridine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



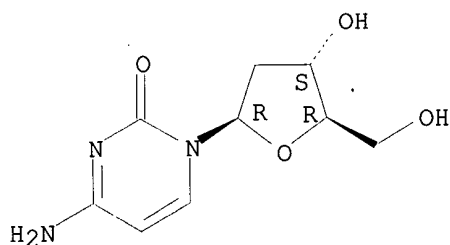
RN 65-46-3 HCAPLUS
CN Cytidine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



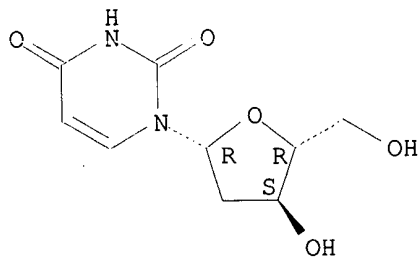
RN 951-77-9 HCAPLUS
CN Cytidine, 2'-deoxy- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 951-78-0 HCAPLUS
CN Uridine, 2'-deoxy- (6CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

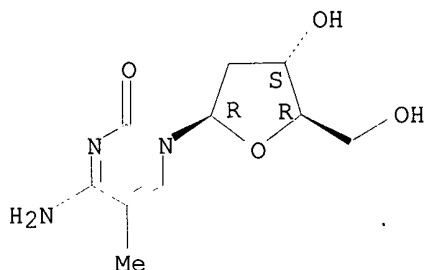


IT 838-07-3P

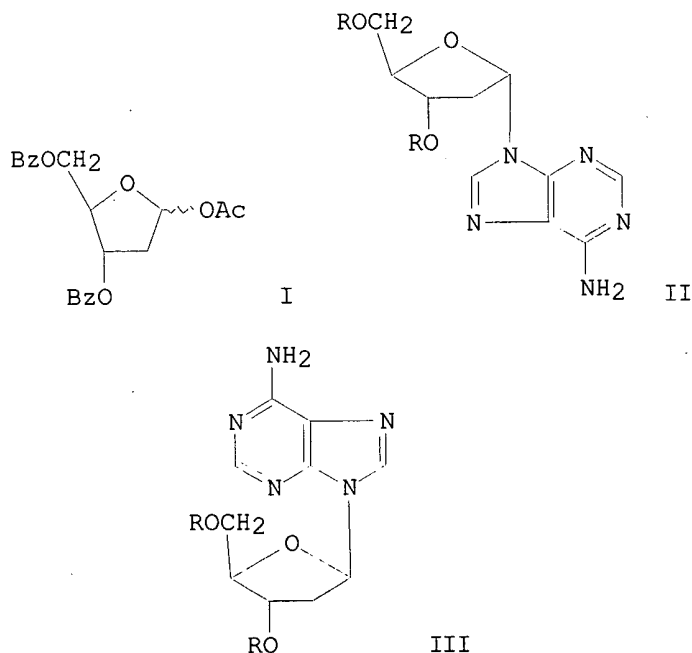
RL: SPN (Synthetic preparation); PREP (Preparation)
(oxidn. of nucleic acid related compds. by the peroxodisulfate ion)

RN 838-07-3 HCAPLUS
 CN Cytidine, 2'-deoxy-5-methyl- (6CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L75 ANSWER 8 OF 30 HCAPLUS COPYRIGHT 2003 ACS
 AN 1991:7050 HCAPLUS
 DN 114:7050
 TI Improved procedure for the regiospecific synthesis of 2'-
 deoxyribonucleosides
 AU Baud, M. V.; Chavis, C.; Lucas, M.; Imbach, J. L.
 CS Lab. Chim. Bio-Org., Univ. Montpellier II, Montpellier, 34095, Fr.
 SO Tetrahedron Letters (1990), 31(31), 4437-40
 CODEN: TELEAY; ISSN: 0040-4039
 DT Journal
 LA English
 CC 33-9 (Carbohydrates)
 OS CASREACT 114:7050
 GI



AB 2'-Deoxyribonucleosides are regiospecifically synthesized in high yields by the KI-dibenzo-18-crown-6 phase-transfer catalyzed condensation of unprotected silylated purines and pyrimidines with 2-deoxyribofuranosyl or

pyranosyl acetates. Thus, dibenzoyldeoxyfuranosyl acetates I were treated with trimethylsilylated adenine in the presence of KI-dibenzo-8-crown-6 in MeCN-PhMe to give 95% a mixt. of .alpha.- and .beta.-2'-deoxynucleosides II and III (R = Bz). Treatment with NH₃-MeOH quant. gave II and III (R = H).

ST deoxyribonucleoside regioselective prepn pyrimidine; nucleoside deoxyribo; benzoyldeoxyfuranosyl acetate condensation silylated purine pyrimidine; benzoyldeoxypyranosyl acetate condensation silylated purine pyrimidine

IT Regiochemistry

(of condensation of silylated purines and pyrimidines with benzoylfuranosyl or -pyranosyl acetates)

IT Condensation reaction

(of silylated purines or pyrimidines with benzoylfuranosyl or -pyranosyl acetates, nucleosides from)

IT Nucleosides, preparation

RL: SPN (Synthetic preparation); PREP (Preparation)

(deoxyribo-, prepn. of, by condensation of silylated purines or pyrimidines with benzoylfuranosyl or -pyranosyl acetates)

IT 65-71-4D, Thymine, silylated 71-30-7D, Cytosine, silylated 73-24-5D, 1H-Purin-6-amine, silylated 73-40-5D, Guanine, silylated

RL: RCT (Reactant); RACT (Reactant or reagent)

(condensation of, with benzoylfuranosyl or -pyranosyl acetates)

IT 533-67-5, 2-Deoxy-D-ribose

RL: PROC (Process)

(conversion of, to benzoylfuranosyl and -pyranosyl acetates)

IT 20838-22-6P **20963-97-7P 35898-30-7P** 51549-15-6P
59921-49-2P 66048-53-1P 119933-37-8P 119933-40-3P 130703-07-0P
130703-08-1P 130703-09-2P 130703-10-5P **130703-11-6P**
130703-12-7P **130703-13-8P** 130703-14-9P 130703-15-0P
130703-16-1P 130703-17-2P 130703-18-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and ammonolysis of)

IT 6974-32-9P 51255-12-0P 130794-93-3P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. and regioselective condensation of, with silylated purines or pyrimidines, nucleosides from)

IT **50-89-5P**, Thymidine, preparation 58-61-7P, Adenosine, preparation 118-00-3P, Guanosine, preparation **951-77-9P**
958-09-8P 961-07-9P 3413-66-9P **4449-40-5P 4449-43-8P**
5682-25-7P 7697-49-6P 13091-56-0P 13091-57-1P 15398-66-0P
17434-50-3P 19916-78-0P 103216-95-1P 103216-96-2P 130703-19-4P
130703-20-7P

RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)

IT **20963-97-7P 35898-30-7P 130703-11-6P 130703-13-8P**

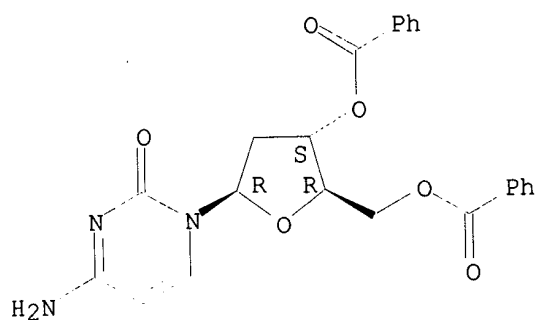
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and ammonolysis of)

RN 20963-97-7 HCAPLUS

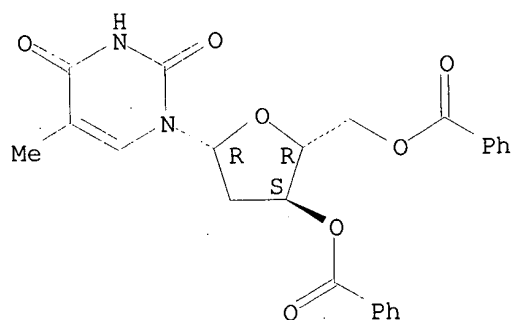
CN Cytidine, 2'-deoxy-, 3',5'-dibenzoate (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



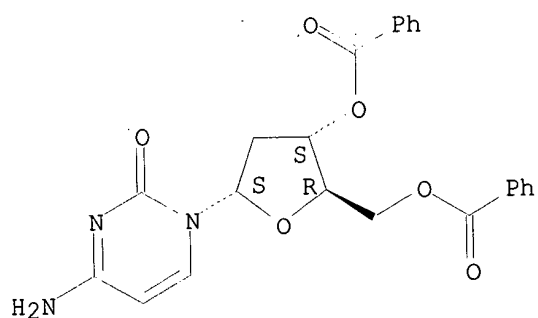
RN 35898-30-7 HCAPLUS
 CN Thymidine, 3',5'-dibenzoate (6CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



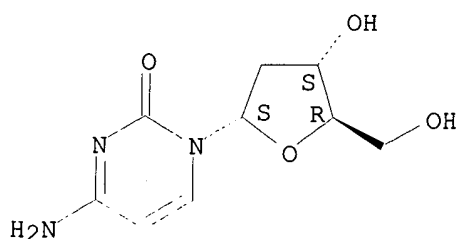
RN 130703-11-6 HCAPLUS
 CN 2(1H)-Pyrimidinone, 4-amino-1-(3,5-di-O-benzoyl-2-deoxy-α-D-erythro-pentofuranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 130703-13-8 HCAPLUS
 CN 2,4(1H,3H)-Pyrimidinedione, 1-(3,5-di-O-benzoyl-2-deoxy-α-D-erythro-pentofuranosyl)-5-methyl- (9CI) (CA INDEX NAME)

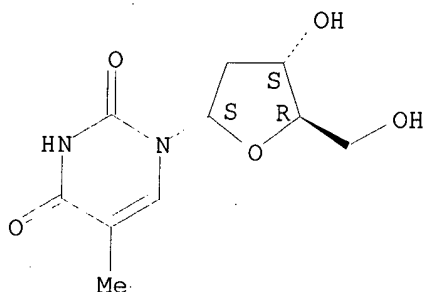
Absolute stereochemistry.



RN 4449-43-8 HCAPLUS

CN 2,4(1H,3H)-Pyrimidinedione, 1-(2-deoxy-.alpha.-D-erythro-pentofuranosyl)-5-methyl- (9CI) (CA INDEX NAME)

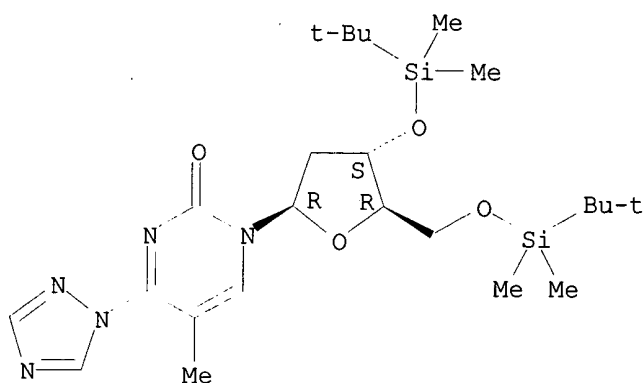
Absolute stereochemistry.



- L75 ANSWER 9 OF 30 HCAPLUS COPYRIGHT 2003 ACS
 AN 1990:631914 HCAPLUS
 DN 113:231914
 TI A simple method for the solid phase synthesis of oligodeoxynucleotides containing O4-alkylthymine
 AU Xu, Yao Zhong; Swann, Peter F.
 CS Dep. Biochem., Univ. Coll., London, WC1E 6BT, UK
 SO Nucleic Acids Research (1990), 18(14), 4061-5
 CODEN: NARHAD; ISSN: 0305-1048
 DT Journal
 LA English
 CC 33-9 (Carbohydrates)
 AB A route to prep. the cyanoethyl phosphoramidite monomer of O4-alkylthymine and a method for the routine solid-phase synthesis of oligodeoxynucleotides contg. O4-alkylthymine are described. This method was used to make DNA sequences up to 48 bases in length. The amino function of the adenine and guanine in the sequence were protected with the phenoxyacetyl group, and that of cytosine with the isobutyryl group. The phosphodiester were protected with the cyanoethyl group. This allowed complete deprotection of the oligomer with alkoxide ions (methanol/1,8- diazabicyclo[5.4.0]undec-7-ene (DBU) for the oligomers contg. O4-methylthymine, or ethanol/DBU for those contg. O4-ethylthymine) attack the O4-alkylthymine to form 5-methylcytosine. There was no detectable loss of the alkyl group to form thymine.
 ST oligodeoxynucleotide solid phase synthesis; thymidine oxygen alkylated prepn phosphorylation; phosphorylation alkylthymidine ethylthymidine methylthymidine; alkylthymidine phosphoramidite prepn oligomerization; ethylthymidine phosphoramidite prepn oligomerization; methylthymidine phosphoramidite prepn oligomerization; oligomerization alkylthymidine ethylthymidine methylthymidine phosphoramidite
 IT Nucleotides, preparation

- RL: SPN (Synthetic preparation); PREP (Preparation)
(O-alkylthymidine phosphoramidates, prepn. of, as monomers for
oligonucleotide synthesis)
- IT Nucleosides, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(O-alkylthymidines, phosphorylation of, with
chloro(cyanoethoxy)(diisopropylamino)phosphine)
- IT Nucleosides, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(O-alkylthymidines, prepn. of, as precursors of oligonucleotide
monomers)
- IT Nucleotides, polymers
RL: RCT (Reactant); RACT (Reactant or reagent)
(oligo-, deoxy-, solid phase synthesis of, using O-alkylthymidine
phosphoramidates)
- IT Nucleotides, polymers
RL: RCT (Reactant); RACT (Reactant or reagent)
(oligo-, deoxyribo-, solid phase synthesis of, using O-alkylthymidine
phosphoramidates)
- IT 117775-85-6P 117775-90-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and phosphorylation of, with chloro(cyanoethoxy)(diisopropylami
no)phosphine)
- IT 50591-13-4P, O4-Methylthymidine 59495-22-6P, O4-Ethylthymidine
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. and tritylation of, with dimethoxytrityl chloride)
- IT 130583-06-1P 130583-07-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as oligonucleotide monomer for solid phase synthesis)
- IT **80991-40-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn., alkoxylation, and desilylation of)
- IT **40733-26-4P**
RL: **RCT (Reactant)**; SPN (Synthetic preparation); PREP
(Preparation); **RACT (Reactant or reagent)**
(prepn., chlorination, and **amination** of, with imidazole)
- IT **50-89-5**, Thymidine, reactions
RL: **RCT (Reactant)**; **RACT (Reactant or reagent)**
(silylation of)
- IT 130583-08-3P 130583-09-4P 130583-10-7P 130583-11-8P 130583-12-9P
130583-13-0P
RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(solid phase synthesis of, using O-alkylthymidines)
- IT **80991-40-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn., alkoxylation, and desilylation of)
- RN 80991-40-8 HCAPLUS
- CN 2(1H)-Pyrimidinone, 1-[2-deoxy-3,5-bis-O-[(1,1-
dimethylethyl)dimethylsilyl]-.beta.-D-erythro-pentofuranosyl]-5-methyl-4-
(1H-1,2,4-triazol-1-yl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 40733-26-4P

RL: **RCT (Reactant)**; SPN (Synthetic preparation); PREP

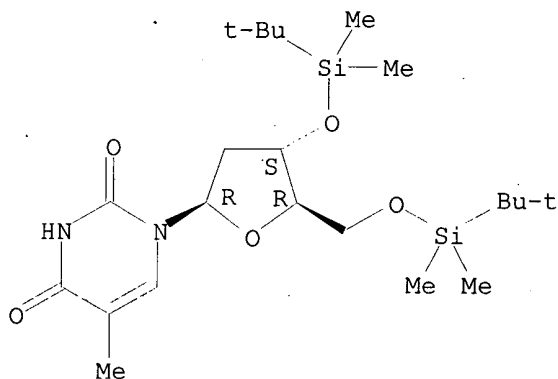
(Preparation); **RACT (Reactant or reagent)**

(prepn., chlorination, and amination of, with imidazole)

RN 40733-26-4 HCAPLUS

CN Thymidine, 3',5'-bis-O-[(1,1-dimethylethyl)dimethylsilyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 50-89-5, Thymidine, reactions

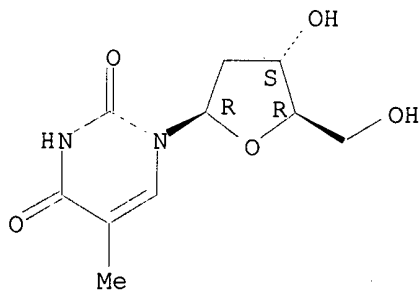
RL: **RCT (Reactant)**; **RACT (Reactant or reagent)**

(silylation of)

RN 50-89-5 HCAPLUS

CN Thymidine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L75 ANSWER 10 OF 30 HCAPLUS COPYRIGHT 2003 ACS

AN 1989:633480 HCAPLUS

DN 111:233480

TI Preparation of cytosine derivatives

IN Ikeda, Takao

PA Yamasa Shoyu Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

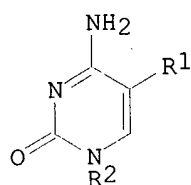
IC ICM C07H019-06

CC 33-9 (Carbohydrates)

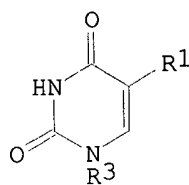
Section cross-reference(s): 28

FAN.CNT 1

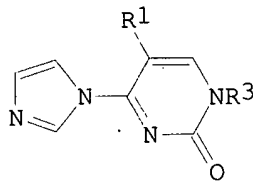
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 01143892	A2	19890606	JP 1987-302889	19871130 <--
	JP 07103149	B4	19951108		
PRAI	JP 1987-302889		19871130 <--		
OS	MARPAT 111:233480				
GI					



I



II



IV

AB The title derivs. I (R₁ = H, halo, alkyl; R₂ = sugar residue), were prep'd. in high yield by treating uracils II (R₁ = same as I, R₃ = sugar residue whose OHs were protected) with imidazole (III) in the presence of phosphates, then **aminating** the resulting imidazolylpyrimidinones (IV). Thus, 2'-deoxyuridine diacetate was stirred with III in the presence of Et₃N and (PhO)₂POCl at 90.degree. for 1 day, treated with aq. NH₃, then treated with conc. HCl to give 93% 2'-deoxycytidine-HCl.

ST cytosine sugar; cytidine; uracil substitution imidazole

IT 69-74-9P, 1-(.beta.-D-Arabinofuranosyl)cytosine hydrochloride

3992-42-5P 7244-51-1P, Cytidine hydrochloride

123931-03-3P, 2',3'-Dideoxycytidine hydrochloride

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of, by substitution of uracils with imidazole)

IT 288-32-4, Imidazole, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(substitution by, of uracils)

IT 2524-64-3, Diphenyl chlorophosphate

RL: RCT (Reactant); RACT (Reactant or reagent)

(substitution of uracils with imidazole in presence of)

IT 4105-38-8 13030-62-1 14057-18-2,

1-(2',3',5'-O-Triacetyl-.beta.-D-arabinofuranosyl)uracil

RL: RCT (Reactant); RACT (Reactant or reagent)

(substitution reaction of, with imidazole)

IT 69-74-9P, 1-(.beta.-D-Arabinofuranosyl)cytosine hydrochloride

3992-42-5P 7244-51-1P, Cytidine hydrochloride

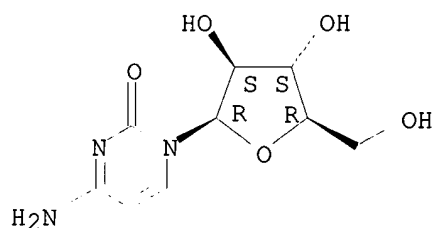
RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of, by substitution of uracils with imidazole)

RN 69-74-9 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-1-.beta.-D-arabinofuranosyl-,
monohydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

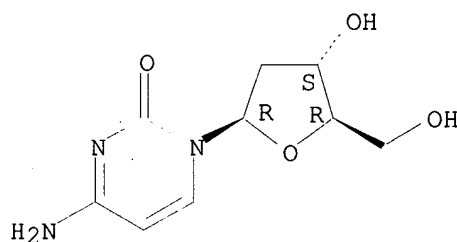


● HCl

RN 3992-42-5 HCAPLUS

CN Cytidine, 2'-deoxy-, monohydrochloride (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

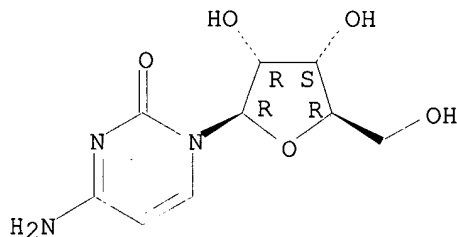


● HCl

RN 7244-51-1 HCAPLUS

CN Cytidine, monohydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



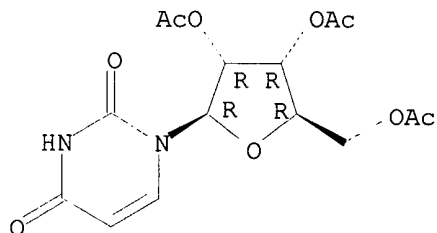
● HCl

IT 4105-38-8 13030-62-1 14057-18-2,
1-(2',3',5'-O-Triacetyl-.beta.-D-arabinofuranosyl)uracil
RL: RCT (Reactant); RACT (Reactant or reagent)
(substitution reaction of, with imidazole)

RN 4105-38-8 HCAPLUS

CN Uridine, 2',3',5'-triacetate (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

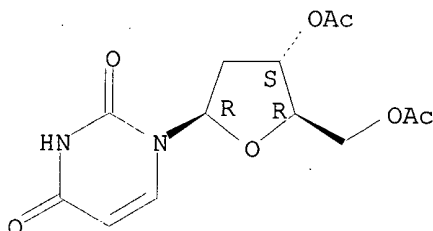
Absolute stereochemistry.



RN 13030-62-1 HCAPLUS

CN Uridine, 2'-deoxy-, 3',5'-diacetate (8CI, 9CI) (CA INDEX NAME)

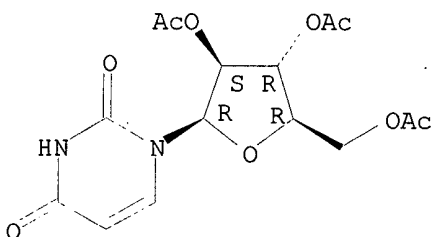
Absolute stereochemistry.



RN 14057-18-2 HCAPLUS

CN 2,4(1H,3H)-Pyrimidinedione, 1-(2,3,5-tri-O-acetyl-.beta.-D-arabinofuranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L75 ANSWER 11 OF 30 HCAPLUS COPYRIGHT 2003 ACS

AN 1989:439791 HCAPLUS

DN 111:39791

TI The oxidative chlorination of pyrimidine and purine bases, and nucleosides using acyl chloride-dimethylformamide-m-chloroperbenzoic acid system

AU Ryu, E. K.; Kim, J. N.

CS Div. Org. Chem., Korea Res. Inst. Chem. Technol., Daedeog-Danji, 300-31, S. Korea

SO Nucleosides & Nucleotides (1989), 8(1), 43-8 ← ?

CODEN: NUNUD5; ISSN: 0732-8311

DT Journal

LA English

CC 33-9 (Carbohydrates)

Section cross-reference(s): 28

OS CASREACT 111:39791

AB Pyrimidine and purine bases, and nucleosides were chlorinated by the reaction of acyl chloride in DMF with MCPBA under mild conditions in moderate yields.

ST oxidative chlorination pyrimidine purine nucleoside; acyl chloride oxidative chlorination

IT Chlorination
(of pyrimidine and purine bases and nucleosides using acyl chloride-dimethylformamide-chloroperbenzoic acid system)

IT Acid chlorides
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidative chlorination of pyrimidine and purine bases and nucleosides with DMF, chloroperbenzoic acid, and)

IT Nucleosides, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(purine, oxidative chlorination of, using acyl chloride dimethylformamide-chloroperbenzoic acid system)

IT Nucleosides, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(pyrimidine, oxidative chlorination of, using acyl chloride dimethylformamide-chloroperbenzoic acid system)

IT 98-88-4, Benzoyl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidative chlorination of pyrimidine and purine bases and nucleosides using DMF, chloroperbenzoic acid, and)

IT 75-36-5, Acetyl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidative chlorination of uracil by chloroperbenzoic acid and)

IT 120-73-0D, Purine, bases and nucleosides 289-95-2D, Pyrimidine, bases and nucleosides
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidative chlorination of, using acyl chloride-dimethylformamide-chloroperbenzoic acid system)

IT 58-61-7, Adenosine, reactions 58-96-8, Uridine 65-46-3, Cytidine 66-22-8, 2,4(1H,3H)-Pyrimidinedione, reactions 71-30-7 73-24-5, 1H-Purin-6-amine, reactions 951-77-9 951-78-0 958-09-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidative chlorination of, with acyl chloride-dimethylformamide-chloroperbenzoic acid system)

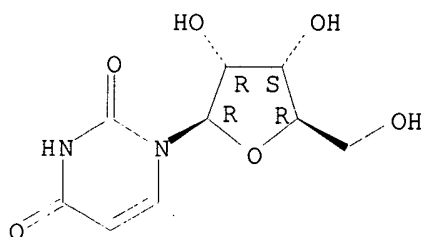
IT 50-90-8P 1820-81-1P 2347-43-5P 2880-89-9P 25130-29-4P 28128-28-1P 32387-56-7P 34408-14-5P 69260-67-9P 85562-55-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

IT 58-96-8, Uridine 65-46-3, Cytidine 951-77-9 951-78-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidative chlorination of, with acyl chloride-dimethylformamide-chloroperbenzoic acid system)

RN 58-96-8 HCAPLUS

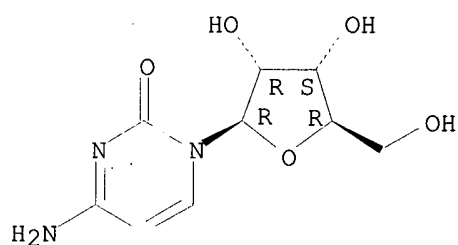
CN Uridine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



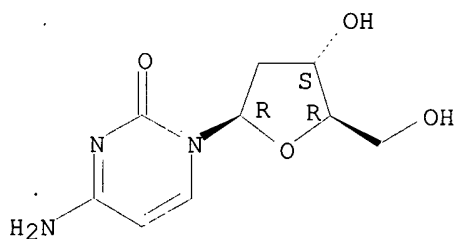
RN 65-46-3 HCAPLUS
CN Cytidine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



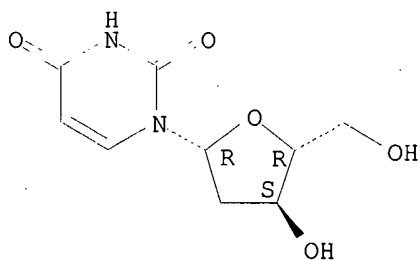
RN 951-77-9 HCAPLUS
CN Cytidine, 2'-deoxy- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 951-78-0 HCAPLUS
CN Uridine, 2'-deoxy- (6CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



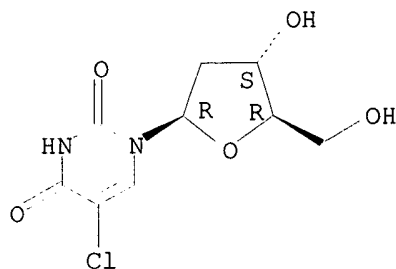
IT 50-90-8P 2880-89-9P 25130-29-4P
32387-56-7P
RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of)

RN 50-90-8 HCAPLUS

CN Uridine, 5-chloro-2'-deoxy- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

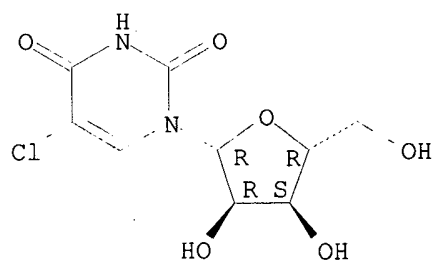
Absolute stereochemistry.



RN 2880-89-9 HCAPLUS

CN Uridine, 5-chloro- (7CI, 8CI, 9CI) (CA INDEX NAME)

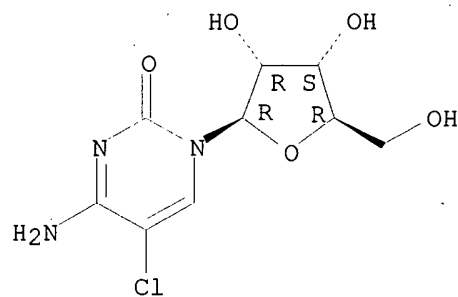
Absolute stereochemistry.



RN 25130-29-4 HCAPLUS

CN Cytidine, 5-chloro- (8CI, 9CI) (CA INDEX NAME)

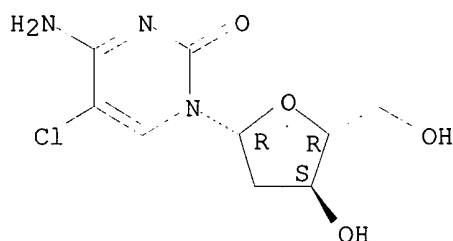
Absolute stereochemistry.



RN 32387-56-7 HCAPLUS

CN Cytidine, 5-chloro-2'-deoxy- (6CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L75 ANSWER 12 OF 30 HCAPLUS COPYRIGHT 2003 ACS

AN 1988:493540 HCAPLUS

DN 109:93540

TI Preparation of (aminoalkynyl)nucleotides as intermediates for fluorescent chain terminators for DNA sequencing

IN Hobbs, Frank Worden, Jr.; Cocuzza, Anthony Joseph

PA du Pont de Nemours, E. I., and Co., USA

SO Eur. Pat. Appl., 40 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C07D403-04

ICS C07D471-04; C07H019-14; C07H019-073; C07D239-54

ICI C07D471-04, C07D239-00, C07D209-00

CC 33-9 (Carbohydrates)

Section cross-reference(s): 9

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	EP 251786	A2	19880107	EP 1987-305844	19870701 <--
	EP 251786	A3	19891206		
	EP 251786	B1	19941130		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	US 5047519	A	19910910	US 1987-57565	19870612 <--
	CA 1340022	A1	19980901	CA 1987-540946	19870630 <--
	DK 8703375	A	19880103	DK 1987-3375	19870701 <--
	NO 8702757	A	19880104	NO 1987-2757	19870701 <--
	NO 171981	B	19930215		
	NO 171981	C	19930526		
	ES 2066760	T3	19950316	ES 1987-305844	19870701 <--
	JP 63152364	A2	19880624	JP 1987-166224	19870702 <--
	JP 08005908	B4	19960124		
	JP 09124636	A2	19970513	JP 1996-221531	19870702 <--
	JP 10158530	A2	19980616	JP 1997-304768	19870702 <--
	US 5151507	A	19920929	US 1991-713906	19910612 <--
	DK 9300819	A	19930707	DK 1993-819	19930707 <--
	DK 9300820	A	19930707	DK 1993-820	19930707 <--
	US 5625081	A	19970429	US 1994-181284	19940113 <--
	US 5558991	A	19960924	US 1994-192915	19940207 <--
	US 5608063	A	19970304	US 1995-412409	19950328 <--
PRAI	US 1986-881372		19860702	<--	
	US 1987-57565		19870612	<--	
	US 1987-57566		19870612	<--	
	JP 1994-119539		19870702	<--	
	JP 1996-221531		19870702	<--	
	US 1991-780346		19911022	<--	
	US 1991-780347		19911022	<--	
	US 1992-981148		19921124	<--	
	US 1993-981026		19930217	<--	
	US 1994-181358		19940113	<--	

OS MARPAT 109:93540
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

- AB The title compds. [I-IV; R = H, NH₂; R₁ = R₂R₃NZC.tplbond.C; R₂, R₃ = H, C1-4 alkyl, protecting group; R₄ = sugar moiety Q, Q₁, ether moiety Q₂; R₅ = H, (HO)2P(O), H₃P2O₆, H₄P3O₉; when R₇ = R₈ = H, then R₆ = H, OH, F, NH₂, N₃; when R₇ = H, R₈ = OH, then R₆ = H, OH; when R₇ = OH, R₈ = H, then R₆ = OH; Z = diradical moiety of 1-20 atoms] and their salts were prepd. for coupling with fluorescent dyes to prep. fluorescent chain terminators for DNA sequencing. 6-Methoxy-2-(methylthio)-9-(2,3-dideoxy-5-O-trityl-.beta.-D-ribofuranosyl)-7-deazapurine, prepd. in 5 steps from 6-methoxy-2-(methylthio)-7-deazapurine, was iodinated by treatment with N-iodosuccinimide and the 7-iodo deriv. was de-O-methylated, oxidized to the sulfoxide and ammonolyzed, and detritylated to give azaguanosine IV (R = NH₂, R₁ = iodo, R₄ = Q, R₅-R₈ = H). This was coupled with HC.tplbond.CCH₂NHCOCF₃ in the presence of (Ph₃P)₄Pd/CuI catalyst and the product converted to the triphosphate and deprotected to give IV (R = NH₂, R₁ = H₂NCH₂C.tplbond.C, R₄ = Q, R₅ = H₄P3O₉, R₆-R₈ = H). This was condensed with a xanthene deriv. (prepn. given) to give fluorescent chain terminator V.
- ST aminoalkynylnucleotide intermediate chain terminator DNA sequencing; nucleotide aminoalkynyl; fluorescent chain terminator DNA sequencing
- IT Coupling reaction catalysts
(cuprous iodide and palladium phosphine complexes, for idonucleoside bases with alkynylamines)
- IT Deoxyribonucleic acid sequences
(detn. of, (aminoalkynyl)nucleotides as intermediates for fluorescent chain terminators for)
- IT Nucleotides, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(deoxyribo-, aminoalkynyl-, prepn. of, as intermediates for fluorescent chain terminators for DNA sequencing)
- IT 516-12-1, N-Iodosuccinimide 7790-99-0, Iodine monochloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(iodination by, of nucleoside bases)
- IT 14719-21-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and coupling of, with idonucleosides, catalysts for)
- IT 115899-58-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as fluorescent chain terminator for DNA sequencing)
- IT 496-73-1P **611-53-0P** 634-65-1P 6248-20-0P 15252-44-5P,
4-Pentyn-1-amine 18202-10-3P, 11-Dodecyn-1-ol 40627-30-3P
54384-05-3P 64702-16-5P 71084-07-6P 88499-44-9P 96027-44-0P
97337-37-6P 97481-18-0P 98891-39-5P 98891-40-8P 98921-75-6P
105784-83-6P 114748-39-9P 114748-40-2P 114748-41-3P 114748-42-4P
114748-43-5P 114748-44-6P 114748-45-7P 114748-46-8P 114748-47-9P
114748-48-0P 114748-49-1P 114748-50-4P 114748-51-5P 114748-52-6P
114748-53-7P 114748-54-8P 114748-55-9P 114748-56-0P 114748-57-1P
114748-58-2P 114748-59-3P 114748-60-6P 114748-61-7P 114748-62-8P
114748-63-9P 114748-64-0P 114748-65-1P 114748-66-2P 114748-67-3P
114748-68-4P 114748-69-5P 114748-70-8P 114748-71-9P 114748-73-1P
114748-76-4P 115899-24-6P 115899-25-7P 115899-26-8P 115899-27-9P
115899-28-0P 115899-29-1P 115899-30-4P 115899-31-5P 115899-32-6P
115899-33-7P 115899-34-8P 115899-35-9P 115899-36-0P 115899-37-1P
115899-38-2P 115899-39-3P 115899-40-6P 115899-41-7P 115899-42-8P
115899-43-9P 115899-44-0P 115899-45-1P 115899-46-2P 115899-47-3P

115899-48-4P 115899-49-5P 115899-50-8P 115899-51-9P 115899-52-0P
 115899-53-1P 115899-54-2P 115899-55-3P 115899-56-4P 115899-57-5P
 115899-59-7P 115899-60-0P 115920-24-6P 115920-25-7P 115944-91-7P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of, as fluorescent chain terminator intermediate, for DNA sequencing)

IT **54-42-2**, 5-Iodo-2'-deoxyuridine 69-33-0, Tubercidin 93-61-8,
 N-Methylformanilide 95-01-2, 2,4-Dihydroxybenzaldehyde 102-82-9
 108-30-5, Succinic anhydride, reactions 108-46-3, Resorcinol, reactions
 354-38-1, 2,2,2-Trifluoroacetamide 431-47-0, Methyl trifluoroacetate
 608-25-3, 2-Methylresorcinol **951-77-9**, 2'-Deoxycytidine
 2450-71-7, Propargylamine 3601-89-6 5983-09-5 6066-82-6,
 N-Hydroxysuccinimide 6867-30-7 7481-89-2, 2',3'-Dideoxycytidine
 7722-88-5, Tetrasodium pyrophosphate 13464-19-2, Phenyl
 chlorothioformate 14267-92-6, 5-Chloro-1-pentyne 29877-76-7
 40635-67-4 51795-88-1 54384-06-4 68724-12-9, 1-[(2-
 Hydroxyethoxy)methyl]cytosine 91713-43-8 91713-44-9

RL: **RCT (Reactant); RACT (Reactant or reagent)**

(reaction of, in prepn. of fluorescent chain terminators for DNA sequencing)

IT **611-53-0P**

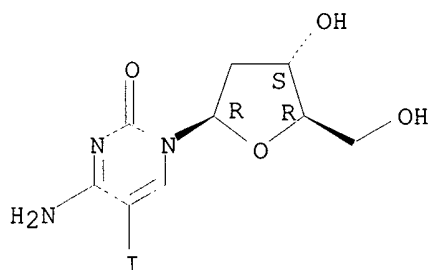
RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of, as fluorescent chain terminator intermediate, for DNA sequencing)

RN 611-53-0 HCAPLUS

CN Cytidine, 2'-deoxy-5-iodo- (7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **54-42-2**, 5-Iodo-2'-deoxyuridine **951-77-9**,
 2'-Deoxycytidine

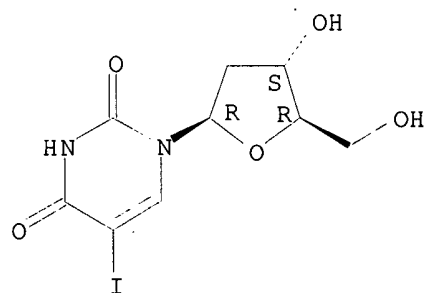
RL: **RCT (Reactant); RACT (Reactant or reagent)**

(reaction of, in prepn. of fluorescent chain terminators for DNA sequencing)

RN 54-42-2 HCAPLUS

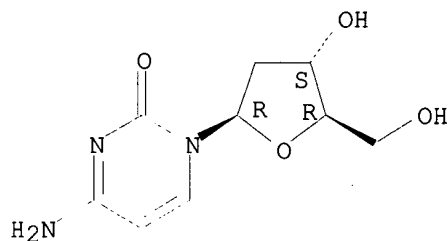
CN Uridine, 2'-deoxy-5-iodo- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 951-77-9 HCAPLUS
 CN Cytidine, 2'-deoxy- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

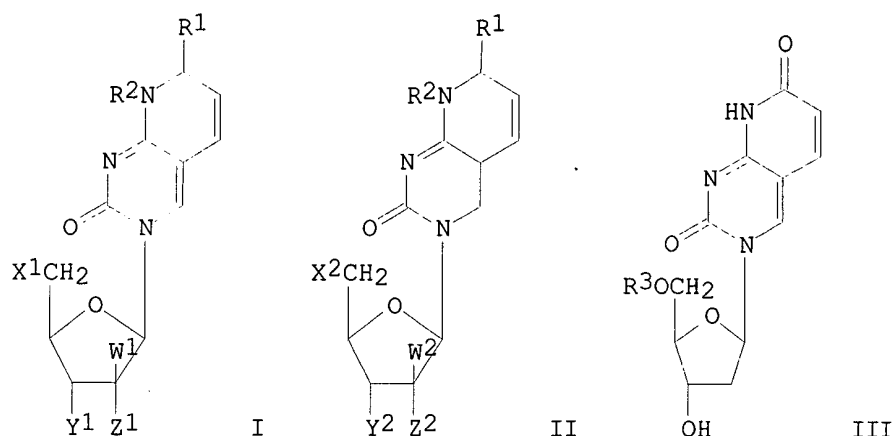


L75 ANSWER 13 OF 30 HCAPLUS COPYRIGHT 2003 ACS
 AN 1988:112894 HCAPLUS
 DN 108:112894
 TI Pyridopyrimidine nucleotide derivatives
 IN Inoue, Hideo; Ohtsuka, Eiko; Imura, Akihiro; Masuda, Kenichi; Kamimura, Takashi
 PA Teijin Ltd. , Japan
 SO PCT Int. Appl., 51 pp.
 CODEN: PIXXD2
 DT Patent
 LA French
 IC ICM C07H019-04
 ICS C07H021-00
 ICA G01N021-75; G01N033-50; G01N033-58; G01N033-68; C12Q001-68; C12N015-00
 CC 33-9 (Carbohydrates)
 Section cross-reference(s): 1, 9

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 8701373	A1	19870312	WO 1986-JP441	19860828 <--
	W: JP, US				
	RW: CH, DE, FR, GB				
	EP 235301	A1	19870909	EP 1986-905396	19860828 <--
	EP 235301	B1	19920722		
	R: CH, DE, FR, GB, LI				
	JP 07025788	B4	19950322	JP 1986-504618	19860828 <--
	US 4965350	A	19901023	US 1989-351317	19890511 <--
PRAI	JP 1985-197689		19850909	<--	
	WO 1986-JP441		19860828	<--	
	US 1987-54910		19870511	<--	

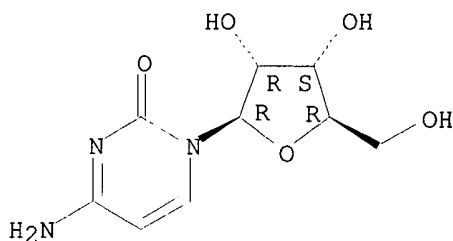
GI



- AB Fluorescent pyridopyrimidine nucleotide derivs. [I; X1, Y1 = HO[P(O)(OH)O]_n, where n = 0-3; however, n cannot be 0 for both X1 and Y1; Z1 = HO[P(O)(OH)O]_m, where m = 0-3; W1 = H, OH; when R1 = amino, halo, R1R2 = bond; when R2 = H, alkyl, R1 = O] and II [X2 = HO[P(O)(OH)O]_r, where r = 0-3, etc.; Y2, Z2 = O, H, OH, etc.; W2 = H, OH] are prepd. for DNA probes. 3-β-D-Deoxyribofuranosyl-2,7-dioxypyrido[2,3-d]pyrimidine (III, R3 = H) in (EtO)₃P(O) was treated with POCl₃ at 0.degree. for 6 h to give, after hydrolysis, the 5'-phosphate [III, R3 = (HO)₂P(O)], which was condensed with the appropriate nucleotides by the solid-phase method to give dodecanucleotides, e.g., dGGGAFTTTCCC (F = fluorescent nucleotide), which were useful as DNA probes.
- ST pyridopyrimidine nucleotide deriv prepn DNA probe; fluorescent pyridopyrimidine nucleotide deriv
- IT Deoxyribonucleic acids
RL: RCT (Reactant); RACT (Reactant or reagent)
(probe, synthesis of fluorescent oligonucleotides for)
- IT 65-46-3 951-77-9
RL: PROC (Process)
(conversion of, into cytidinylmercury chloride)
- IT 107-13-1, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyanovinylation by, of iododeoxyuridine)
- IT 54-42-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyanovinylation of)
- IT 96-33-3D, palladium complex 7440-05-3D, Me acrylate complex
RL: RCT (Reactant); RACT (Reactant or reagent)
(methoxycarbonylvinylation by, of cytidinylmercury chloride)
- IT 96-33-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(methoxycarbonylvinylation by, of iododeoxyuridine)
- IT 80173-35-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and acetylation of)
- IT 113295-55-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and amination of)
- IT 113295-52-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

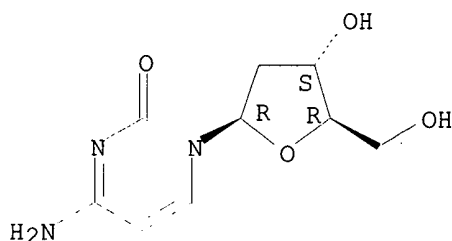
- (prepn. and chlorination of)
 IT 113295-53-7P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. and deacetylation of)
 IT 65523-07-1P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and methoxycarbonylvinylation of)
 IT **147-94-4P** 81206-83-9P 99517-98-3P 113295-47-9P
 113295-50-4P 113295-51-5P 113321-13-4P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and phosphorylation of)
 IT 81244-97-5P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. and photochem. cyclization of)
 IT 113295-56-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and photochem. decyanovinylation of)
 IT 99517-99-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. and reaction of, with chloro(diisopropylamino)methoxyphosphine)
 IT 99518-04-4P 99518-06-6P 99518-08-8P 99533-62-7P 113295-46-8P
 113295-48-0P 113295-49-1P 113295-54-8P 113295-57-1P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, for DNA probe)
 IT 86030-43-5, Chloro(diisopropylamino)methoxyphosphine
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with protected deoxyribofuranosyldioxypyrimidine)
 IT **65-46-3 951-77-9**
 RL: PROC (Process)
 (conversion of, into cytidinylmercury chloride)
 RN 65-46-3 HCAPLUS
 CN Cytidine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



- RN 951-77-9 HCAPLUS
 CN Cytidine, 2'-deoxy- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



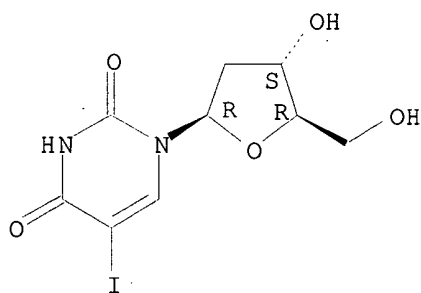
IT 54-42-2

RL: RCT (Reactant); RACT (Reactant or reagent)
(cyanovinylation of)

RN 54-42-2 HCAPLUS

CN Uridine, 2'-deoxy-5-iodo- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



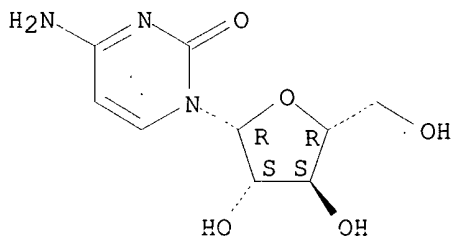
IT 147-94-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and phosphorylation of)

RN 147-94-4 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-1-.beta.-D-arabinofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L75 ANSWER 14 OF 30 HCAPLUS COPYRIGHT 2003 ACS

AN 1987:637192 HCAPLUS

DN 107:237192

TI Pyridyl groups for protection of the imide functions of uridine and
guanosine. Exploration of their displacement reactions for site-specific
modifications of uracil and guanine bases

AU Zhou, X. X.; Welch, C. J.; Chattopadhyaya, J.

CS Biomed. Cent., Uppsala Univ., Uppsala, S-751 23, Swed.

SO Acta Chemica Scandinavica, Series B: Organic Chemistry and Biochemistry (

1986), B40(10), 806-16

CODEN: ACBOCV; ISSN: 0302-4369

DT Journal

LA English

CC 33-9 (Carbohydrates)

OS CASREACT 107:237192

AB For the protection of the O-4 function of uridine and the O-6 of guanosine, 2-, 3- and 4-hydroxypyridines, 2-pyridinethiol, 6-methyl-2-hydroxy- and 6-methyl-3-hydroxypyridines were employed. These substituted pyridines gave pyridyl-N- and/or pyridyl-O-substituted derivs., depending both upon the position of the hydroxyl and Me groups in the pyridine ring, at the C-4 and the C-6 of the uracil and guanine residues, resp. These groups were good leaving groups for nucleophilic substitution reactions by **amines**, thiolates and oximate. If needed, the rate of these substitution reactions could be conveniently increased by almost 1000-fold by conversion of the pyridyl moiety to its methiodide.

ST pyridyl group protection uridine guanosine; nucleophilic substitution uridine guanosine

IT Substitution reaction, nucleophilic
(of pyridyl derivs. of uridine and guanosine)

IT Protective groups
(substituted pyridyl, for imide functions of uridine and guanosine)

IT 108782-91-8P **111426-23-4P** 111426-24-5P 111426-25-6P
111426-26-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and deprotection of)

IT **4105-38-8P**

RL: **RCT (Reactant)**; SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(prepn. and reaction of, with pyridine derivs.)

IT 108324-68-1P 108324-69-2P 108324-70-5P 108324-71-6P
108324-74-9P 108324-75-0P 108324-77-2P 108324-78-3P
108324-80-7P 108348-48-7P 111426-27-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and substitution reactions of)

IT **10578-79-7P 98222-28-7P** 99519-13-8P 108324-72-7P
108324-73-8P 111426-18-7P 111426-19-8P

111426-20-1P 111426-21-2P 111426-22-3P 111426-28-9P
111426-29-0P 111426-30-3P 111426-31-4P 111426-32-5P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

IT **65-46-3P**, Cytidine

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, from uridine)

IT 85078-95-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn., trimethylsilylation, and reaction with pyridine deriv.)

IT 110-89-4, Piperidine, reactions 110-91-8, Morpholine, reactions
506-59-2, Dimethylamine hydrochloride 593-51-1, Methylamine hydrochloride 5680-79-5, Glycine methyl ester hydrochloride 5680-80-8
37602-52-1 86175-49-7

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with uridine deriv.)

IT 108-96-3, 4-Pyridone 109-00-2, 3-Pyridinol 142-08-5, 2-Pyridone
1121-78-4, 6-Methyl-3-pyridinol 2637-34-5 3279-76-3,
6-Methyl-2-pyridone

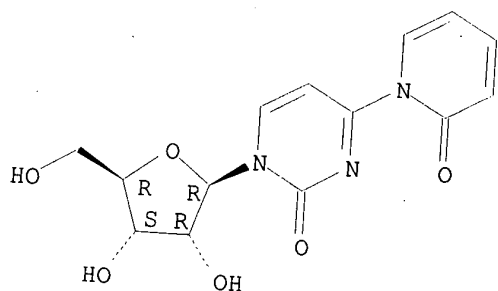
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with uridine or guanosine derivs.)

IT 69304-38-7

RL: RCT (Reactant); RACT (Reactant or reagent)
 (trimethylsilylation of, for reaction with substituted pyridines)
 IT 58-96-8, Uridine
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (O-acetylation of)

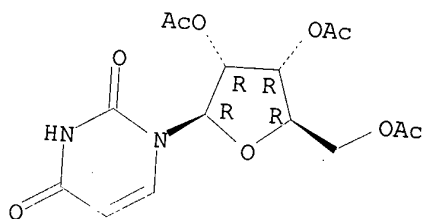
IT 111426-23-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (prepn. and deprotection of)
 RN 111426-23-4 HCAPLUS
 CN 2(1H)-Pyrimidinone, 4-(2-oxo-1(2H)-pyridinyl)-1-.beta.-D-ribofuranosyl-
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.



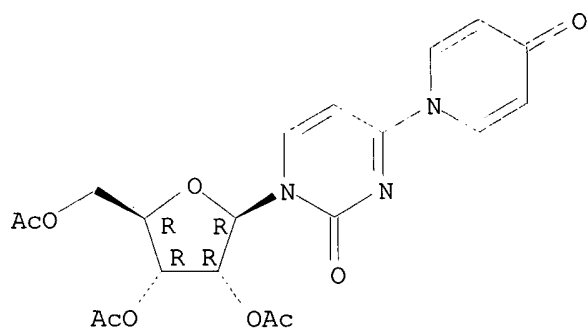
IT 4105-38-8P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP
 (Preparation); RACT (Reactant or reagent)
 (prepn. and reaction of, with pyridine derivs.)
 RN 4105-38-8 HCAPLUS
 CN Uridine, 2',3',5'-triacetate (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



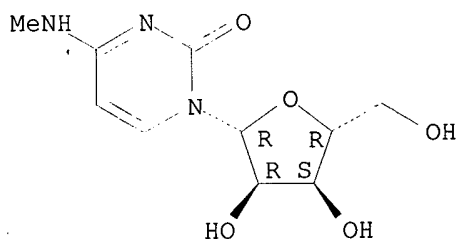
IT 108324-74-9P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (prepn. and substitution reactions of)
 RN 108324-74-9 HCAPLUS
 CN 2(1H)-Pyrimidinone, 4-(4-oxo-1(4H)-pyridinyl)-1-(2,3,5-tri-O-acetyl-.beta.-
 D-ribofuranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



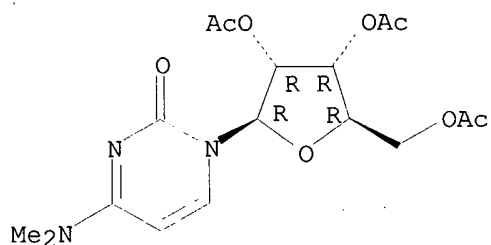
IT 10578-79-7P 98222-28-7P 108324-73-8P
 111426-18-7P 111426-19-8P 111426-20-1P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)
 RN 10578-79-7 HCAPLUS
 CN Cytidine, N-methyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



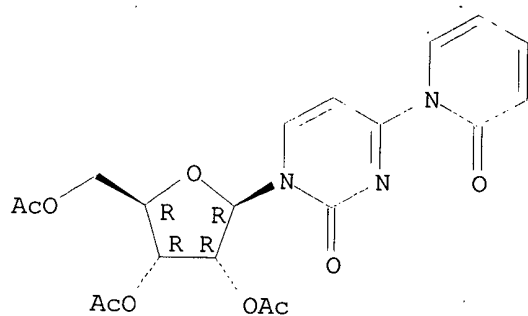
RN 98222-28-7 HCAPLUS
 CN Cytidine, N,N-dimethyl-, 2',3',5'-triacetate (7CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 108324-73-8 HCAPLUS
 CN 2(1H)-Pyrimidinone, 4-(2-oxo-1(2H)-pyridinyl)-1-(2,3,5-tri-O-acetyl-.beta.-D-ribofuranosyl)- (9CI) (CA INDEX NAME)

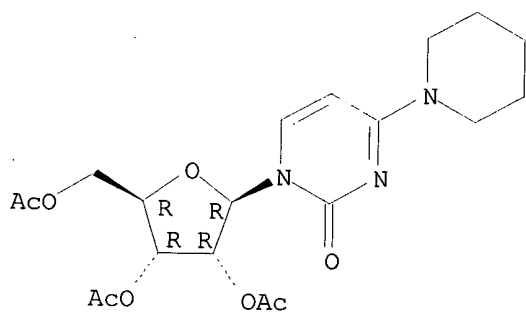
Absolute stereochemistry.



RN 111426-18-7 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-(1-piperidinyl)-1-(2,3,5-tri-O-acetyl-.beta.-D-ribofuranosyl)- (9CI) (CA INDEX NAME)

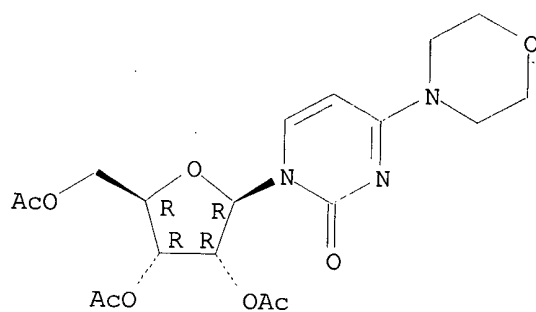
Absolute stereochemistry.



RN 111426-19-8 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-(4-morpholinyl)-1-(2,3,5-tri-O-acetyl-.beta.-D-ribofuranosyl)- (9CI) (CA INDEX NAME)

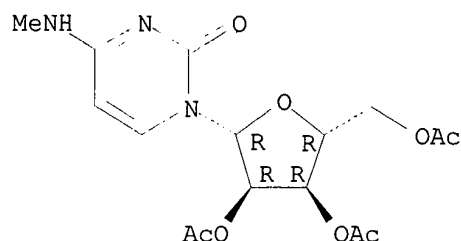
Absolute stereochemistry.



RN 111426-20-1 HCAPLUS

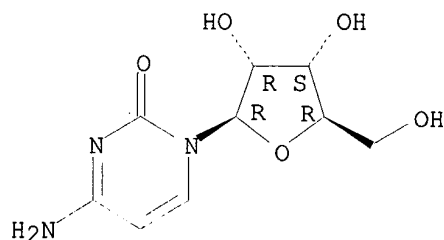
CN Cytidine, N-methyl-, 2',3',5'-triacetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



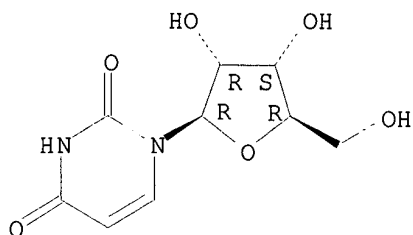
IT **65-46-3P**, Cytidine
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, from uridine)
 RN 65-46-3 HCAPLUS
 CN Cytidine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **58-96-8**, Uridine
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (O-acetylation of)
 RN 58-96-8 HCAPLUS
 CN Uridine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

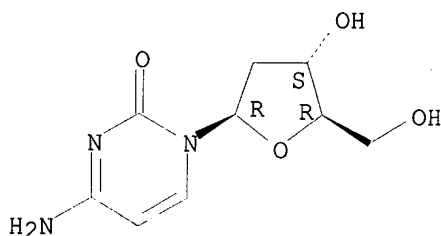


L75 ANSWER 15 OF 30 HCAPLUS COPYRIGHT 2003 ACS
 AN 1987:534617 HCAPLUS
 DN 107:134617
 TI Hybridization triggered cross-linking of deoxyoligonucleotides
 AU Webb, Thomas R.; Matteucci, Mark D.
 CS Dep. Mol. Biol., Genentech, Inc., San Francisco, CA, 94080, USA
 SO Nucleic Acids Research (1986), 14(19), 7661-74
 CODEN: NARHAD; ISSN: 0305-1048
 DT Journal
 LA English
 CC 33-10 (Carbohydrates)
 Section cross-reference(s): 6

- AB Oligodeoxynucleotides contg. the modified base 5-methyl-N4,N4-ethanocytosine (Ce) were prepd. on polymer support. The 9-fluorenylmethoxycarbonyl group was used as a protecting group for the exocyclic **amines** of dA and dC. This group can be removed rapidly under very mild conditions. Oligomers contg. the Ce base form a cross-link when hybridized to their complementary deoxyoligonucleotides. Some of the scope and limitations of these cross-link forming oligonucleotides are reported.
- ST deoxyoligonucleotide prepn hybridization crosslinking; nucleotide oligodeoxy prepn hybridization crosslinking; ethanocytosine oligodeoxynucleotide; protective group fluorenylmethoxycarbonyl nucleotide
- IT Crosslinking
(of deoxyoligonucleotides, hybridization triggered)
- IT Protective groups
((fluorenylmethoxy)carbonyl, for exocyclic amino group of deoxyadenosine and deoxycytidine, in synthesis of oligodeoxynucleotides)
- IT Nucleotides, polymers
RL: RCT (Reactant); RACT (Reactant or reagent)
(oligo-, deoxy-, hybridization triggered cross-linking of)
- IT Nucleotides, polymers
RL: SPN (Synthetic preparation); PREP (Preparation)
(oligo-, deoxyribo-, prepn. of, contg. methylethanocytosine)
- IT **951-77-9, 2'-Deoxycytidine**
RL: RCT (Reactant); RACT (Reactant or reagent)
((fluorenylmethoxy)carbonylation and dimethoxytritylation of, for synthesis of oligodeoxynucleotides)
- IT 87424-19-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and dimethoxytritylation of, for synthesis of oligodeoxynucleotides)
- IT **80991-40-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, with aminoethanol)
- IT **109389-24-4P 109389-25-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, with aziridine)
- IT 110071-17-5P 110341-91-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, with deoxyoligonucleotides)
- IT 109489-08-9P 109489-09-0P 109489-10-3P 109489-11-4P 109489-12-5P
109489-13-6P 109489-14-7P 109489-15-8P 109489-16-9P 109489-17-0P
109489-18-1P 109523-81-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, with oligodeoxynucleotide contg. modified base methylethanocytosine)
- IT 101712-10-1P 109389-29-9P 109389-31-3P 109489-06-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
- IT **109389-26-6P 109389-27-7P 109389-28-8P**
109389-32-4P 109389-33-5P 109420-85-1P 109420-86-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, for synthesis of oligodeoxynucleotides)
- IT **50-89-5, Thymidine, reactions 951-78-0, 2'-Deoxyuridine**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with (dimethylamino)trimethylsilane and phosphoryl tristriazole)
- IT 72741-18-5

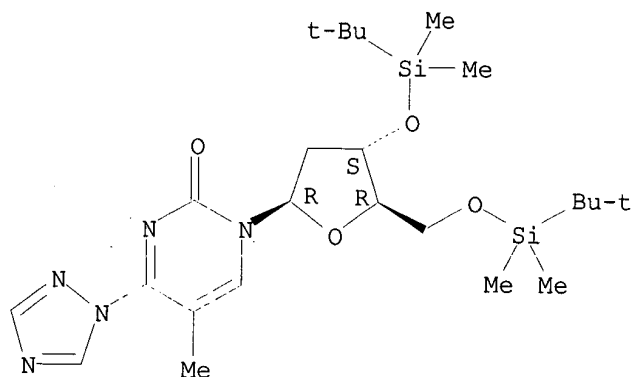
- RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with deoxyribonucleosides)
- IT **40733-26-4** 98796-51-1 109389-30-2
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(reaction of, with phosphoryl tristriazolidine)
- IT 141-43-5, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with triazolyldoxyribonucleoside)
- IT 151-56-4, Aziridine, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with triazolyldoxyribonucleosides)
- IT **951-77-9**, 2'-Deoxycytidine
RL: RCT (Reactant); RACT (Reactant or reagent)
((fluorenylmethoxy)carbonylation and dimethoxytritylation of, for
synthesis of oligodeoxynucleotides)
- RN 951-77-9 HCAPLUS
- CN Cytidine, 2'-deoxy- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



- IT **80991-40-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. and reaction of, with aminoethanol)
- RN 80991-40-8 HCAPLUS
- CN 2(1H)-Pyrimidinone, 1-[2-deoxy-3,5-bis-O-[(1,1-dimethylethyl)dimethylsilyl]-.beta.-D-erythro-pentofuranosyl]-5-methyl-4-(1H-1,2,4-triazol-1-yl)- (9CI) (CA INDEX NAME)

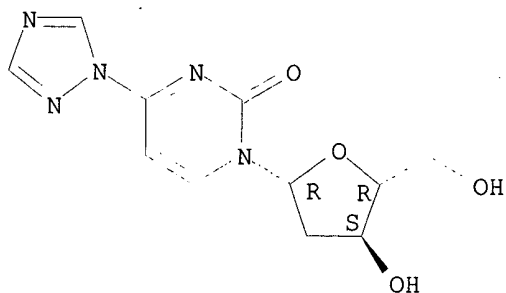
Absolute stereochemistry.



- IT **109389-24-4P 109389-25-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. and reaction of, with aziridine)
- RN 109389-24-4 HCAPLUS

CN 2(1H)-Pyrimidinone, 1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-4-(1H-1,2,4-triazol-1-yl)- (9CI) (CA INDEX NAME)

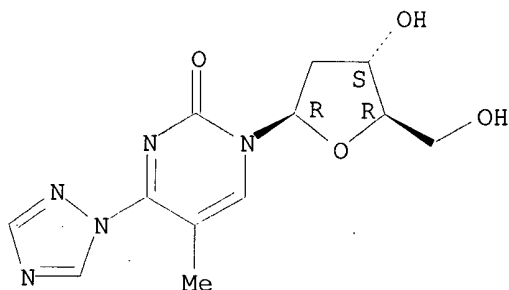
Absolute stereochemistry.



RN 109389-25-5 HCAPLUS

CN 2(1H)-Pyrimidinone, 1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-5-methyl-4-(1H-1,2,4-triazol-1-yl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



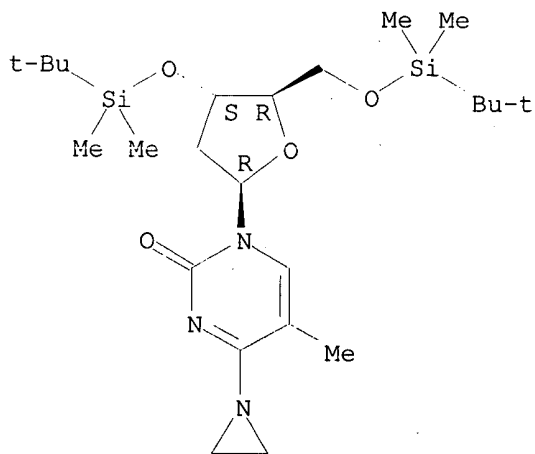
IT 109389-26-6P 109389-27-7P 109389-28-8P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, for synthesis of oligodeoxynucleotides)

RN 109389-26-6 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-(1-aziridinyl)-1-[2-deoxy-3,5-bis-O-[(1,1-dimethylethyl)dimethylsilyl]-.beta.-D-erythro-pentofuranosyl]-5-methyl- (9CI) (CA INDEX NAME)

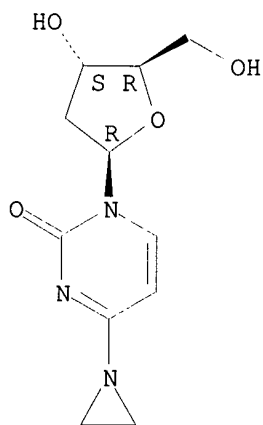
Absolute stereochemistry.



RN 109389-27-7 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-(1-aziridinyl)-1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)- (9CI) (CA INDEX NAME)

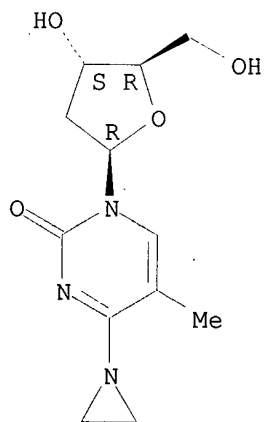
Absolute stereochemistry.



RN 109389-28-8 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-(1-aziridinyl)-1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-5-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 50-89-5, Thymidine, reactions 951-78-0, 2'-Deoxyuridine

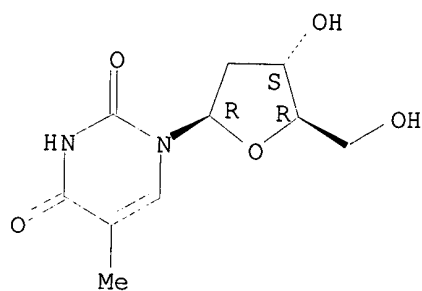
RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with (dimethylamino)trimethylsilane and phosphoryl triastriazolidine)

RN 50-89-5 HCAPLUS

CN Thymidine (8CI, 9CI) (CA INDEX NAME)

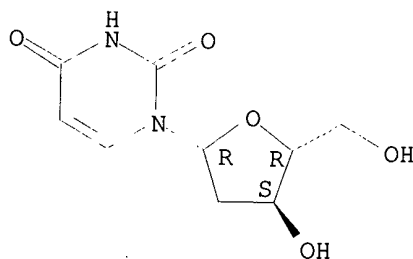
Absolute stereochemistry.



RN 951-78-0 HCAPLUS

CN Uridine, 2'-deoxy- (6CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



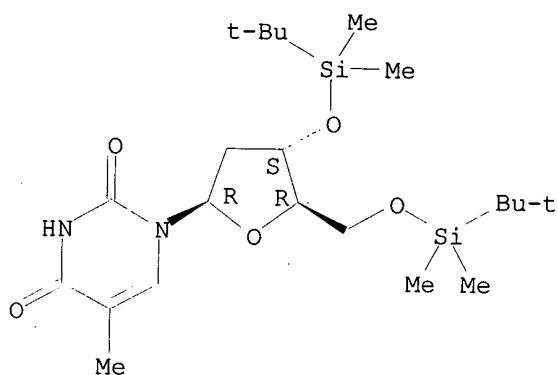
IT 40733-26-4

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with phosphoryl tristriazolid)

RN 40733-26-4 HCAPLUS

CN Thymidine, 3',5'-bis-O-[(1,1-dimethylethyl)dimethylsilyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L75 ANSWER 16 OF 30 HCAPLUS COPYRIGHT 2003 ACS

AN 1987:214307 HCAPLUS

DN 106:214307

TI Conversion of uracil derivatives to cytosine derivatives

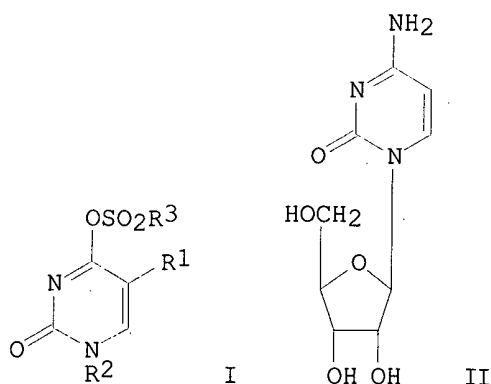
IN Kawada, Mitsuru; Matsumoto, Kiyoharu; Tsurushima, Masaaki

PA Takeda Chemical Industries, Ltd., Japan

SO Eur. Pat. Appl., 21 pp.

CODEN: EPXXDW
 DT Patent
 LA English
 IC ICM C07H019-06
 CC 33-9 (Carbohydrates)
 FAN.CNT 1

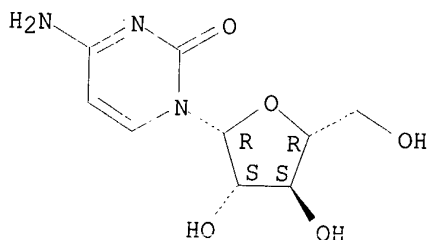
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 204264	A2	19861210	EP 1986-107302	19860529 <--
	EP 204264	A3	19880107		
	EP 204264	B1	19900816		
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	JP 62089667	A2	19870424	JP 1986-24640	19860205 <--
	US 4754026	A	19880628	US 1986-866960	19860527 <--
	AT 55609	E	19900915	AT 1986-107302	19860529 <--
	CN 86103615	A	19861203	CN 1986-103615	19860601 <--
	CN 1012367	B	19910417		
	ES 555646	A1	19871201	ES 1986-555646	19860603 <--
	CA 1268174	A1	19900424	CA 1986-510679	19860603 <--
	ES 557707	A1	19880301	ES 1987-557707	19870901 <--
PRAI	JP 1985-121786		19850604 <--		
	JP 1986-24640		19860205 <--		
	EP 1986-107302		19860529 <--		
OS	CASREACT 106:214307				
GI					



- AB O-Sulfonated uracils I (R1 = H, alkyl, alkoxy, halo; R2 = protected glycosyl; R3SO2 = org. sulfonyl group) were prepd. by treating the corresponding protected uracils with R3SO2X (X = halo) in an org. solvent at 0-150.degree. in the presence of K2CO3. Aminolysis of I with NH3 or primary amines gave cytosines, intermediates for pharmaceuticals such as citicoline (no data). 2',3',5'-Tri-O-acetyluridine was stirred at 80.degree. in MeCOCH2CHMe2 with 4-MeC6H4SO2Cl and K2CO3 to give 97.7% I (R1 = H, R2 = 2,3,5-tri-O-acetyl-.beta.-D-ribofuranosyl, R3 = 4-MeC6H4). This was allowed to stand overnight at room temp. in MeOH/concd. aq. NH3 to give 91.4% cytidine (II).
- ST uridine sulfonylation aminolysis; phenylsulfonyluracil aminolysis; cytidine
- IT 64-04-0, Phenethylamine 123-75-1, Pyrrolidine, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (aminolysis by, of O-sulfonylated uridine deriv.)
- IT 7664-41-7, Ammonia, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)

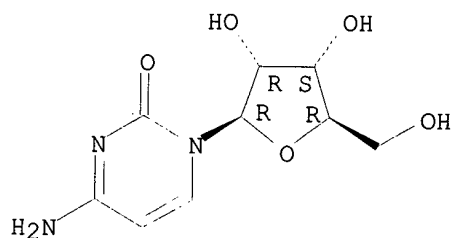
- (aminolysis by, of O-sulfonylated uridines)
- IT 108273-53-6P 108273-54-7P 108273-55-8P 108273-56-9P 108273-57-0P
 108273-58-1P 108273-59-2P 108273-60-5P 108273-61-6P 108273-62-7P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and aminolysis-deprotection of)
- IT 147-94-4P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, by sulfonylation-aminolysis of arabinofuranosyluracil
 deriv.)
- IT 65-46-3P, Cytidine 951-77-9P, 1-(2'-Deoxy-.beta.-D-
 ribofuranosyl)cytosine 2140-61-6P, 5-Methylcytidine
 2341-22-2P, 5-Fluorocytidine 29834-86-4P,
 N,N-Tetramethylenecytidine 108273-51-4P, N-(2-Phenylethyl)cytidine
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, by sulfonylation-aminolysis of uridine deriv.)
- IT 98-68-0, 4-Methoxybenzenesulfonyl chloride 773-64-8,
 2,4,6-Trimethylbenzenesulfonyl chloride 6553-96-4, 2,4,6-
 Triisopropylbenzenesulfonyl chloride 52499-94-2,
 Pentamethylbenzenesulfonyl chloride 55661-08-0, 4-Methoxy-2,6-
 dimethylbenzenesulfonyl chloride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (O-acylation by, of protected uridine deriv.)
- IT 80745-07-9, 4-Methoxy-2,3,6-trimethylbenzenesulfonyl chloride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (O-acylation by, of protected uridines)
- IT 4105-38-8, 2',3',5'-Tri-O-acetyluridine 4336-39-4,
 2',3',5'-Tri-O-acetyl-5-methyluridine 13030-62-1,
 1-(3',5'-Di-O-acetyl-2'-deoxy-.beta.-D-ribofuranosyl)uridine
 14057-18-2, 1-(2',3',5'-Tri-O-acetyl-.beta.-D-
 arabinofuranosyl)uracil 55474-11-8, 2',3',5'-Tri-O-acetyl-5-
 fluorouridine
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (O-sulfonylation of)
- IT 147-94-4P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, by sulfonylation-aminolysis of arabinofuranosyluracil
 deriv.)
- RN 147-94-4 HCAPLUS
 CN 2(1H)-Pyrimidinone, 4-amino-1-.beta.-D-arabinofuranosyl- (9CI) (CA INDEX
 NAME)

Absolute stereochemistry.



- IT 65-46-3P, Cytidine 951-77-9P, 1-(2'-Deoxy-.beta.-D-
 ribofuranosyl)cytosine 2140-61-6P, 5-Methylcytidine
 2341-22-2P, 5-Fluorocytidine 29834-86-4P,
 N,N-Tetramethylenecytidine
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, by sulfonylation-aminolysis of uridine deriv.)
- RN 65-46-3 HCAPLUS
 CN Cytidine (8CI, 9CI) (CA INDEX NAME)

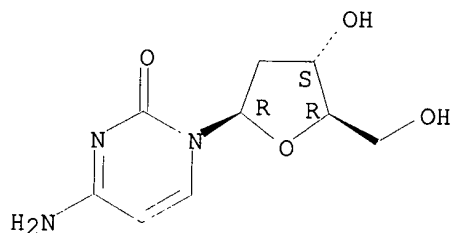
Absolute stereochemistry.



RN 951-77-9 HCAPLUS

CN Cytidine, 2'-deoxy- (8CI, 9CI) (CA INDEX NAME)

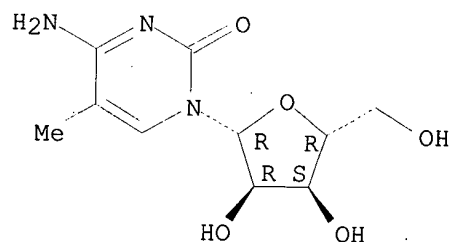
Absolute stereochemistry. Rotation (+).



RN 2140-61-6 HCAPLUS

CN Cytidine, 5-methyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

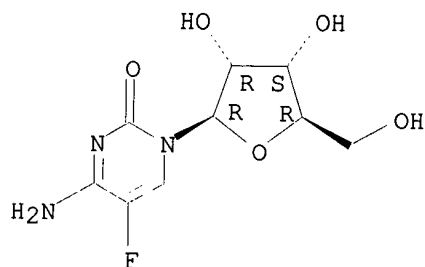
Absolute stereochemistry.



RN 2341-22-2 HCAPLUS

CN Cytidine, 5-fluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

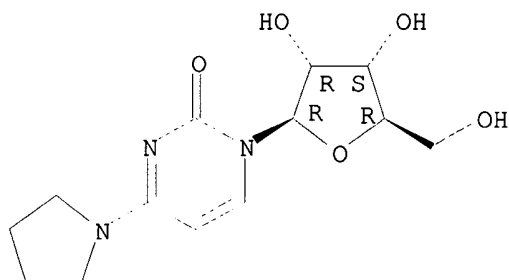
Absolute stereochemistry.



RN 29834-86-4 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-(1-pyrrolidinyl)-1-.beta.-D-ribofuranosyl- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



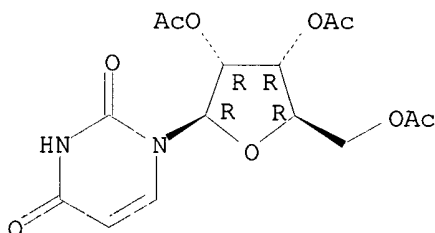
IT 4105-38-8, 2',3',5'-Tri-O-acetyluridine 4336-39-4,
2',3',5'-Tri-O-acetyl-5-methyluridine 13030-62-1,
1-(3',5'-Di-O-acetyl-2'-deoxy-.beta.-D-ribofuranosyl)uridine
14057-18-2, 1-(2',3',5'-Tri-O-acetyl-.beta.-D-
arabinofuranosyl)uracil 55474-11-8, 2',3',5'-Tri-O-acetyl-5-
fluorouridine

RL: **RCT (Reactant); RACT (Reactant or reagent)**
(O-sulfonylation of)

RN 4105-38-8 HCAPLUS

CN Uridine, 2',3',5'-triacetate (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

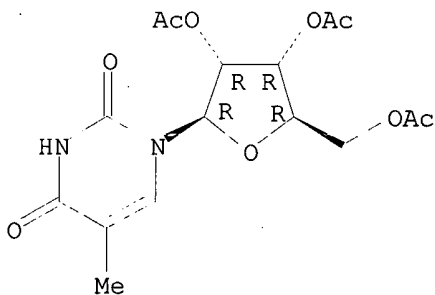
Absolute stereochemistry.



RN 4336-39-4 HCAPLUS

CN Uridine, 5-methyl-, 2',3',5'-triacetate (8CI, 9CI) (CA INDEX NAME)

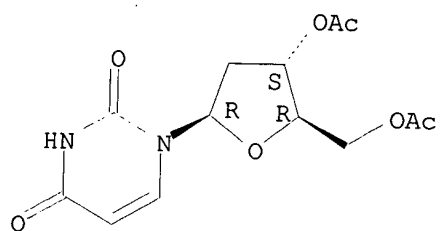
Absolute stereochemistry.



RN 13030-62-1 HCAPLUS

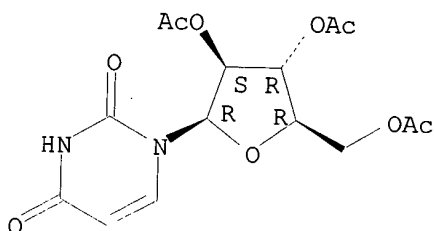
CN Uridine, 2'-deoxy-, 3',5'-diacetate (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



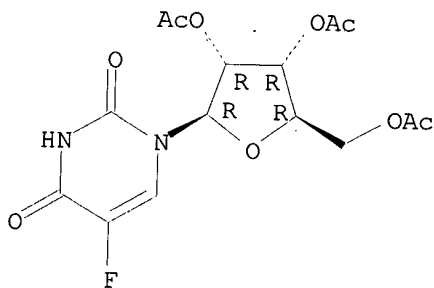
RN 14057-18-2 HCAPLUS
 CN 2,4(1H,3H)-Pyrimidinedione, 1-(2,3,5-tri-O-acetyl-.beta.-D-arabinofuranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 55474-11-8 HCAPLUS
 CN Uridine, 5-fluoro-, 2',3',5'-triacetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L75 ANSWER 17 OF 30 HCAPLUS COPYRIGHT 2003 ACS
 AN 1986:572942 HCAPLUS
 DN 105:172942
 TI Syntheses of fluorine containing nucleosides and nucleobases
 AU Takahara, Takao; Hisanaga, Yorihiro
 CS Daikin Ind., Ltd., Settsu, 566, Japan
 SO Nippon Kagaku Kaishi (1985), (10), 2034-9
 CODEN: NKAKB8; ISSN: 0369-4577
 DT Journal
 LA Japanese
 CC 33-9 (Carbohydrates)
 OS CASREACT 105:172942
 AB Reaction of elemental F with the uracil ring systems in AcOH proceeds via 5,6-difluoro adducts (2 cis-isomers), which were converted to 4 isomer adducts by subsequent solvolysis. Time course adducts were traced by

19F-NMR, but in the case of the cytosine ring systems, the adducts were not detected. The adducts of uridine were converted to stable 6-alkoxy forms and then sepd. 5-Fluorouracil (I), 5-fluorouridine (II), and 2',3'-O-isopropylidene-5'-deoxy-5-fluorouridine (III) were obtained in good yield by fluorination in HF for I and in AcOH for II and III, resp., followed by treatment with HF or an **amine**. Protected uridines were used as starting materials for II and III. 5-Fluorocytosine and 5-fluorocytidine were also obtained in good yield using HF and AcOH-HF mixt., resp., as a solvent for the fluorination.

ST nucleoside fluorination

IT Nucleosides, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)
(fluorination of, by hydrofluoric acid or by hydrofluoric acid-acetic acid)

IT Fluorination

(of nucleosides and nucleoside bases by hydrofluoric acid or by hydrofluoric acid-acetic acid)

IT 65-46-3

RL: RCT (Reactant); RACT (Reactant or reagent)
(fluorination of, by acetic acid-hydrogen fluoride)

IT 66-22-8, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)
(fluorination of, by hydrofluoric acid)

IT 58-96-8 22314-42-7

RL: RCT (Reactant); RACT (Reactant or reagent)
(fluorination of, by hydrofluoric acid-acetic acid)

IT 71-30-7

RL: RCT (Reactant); RACT (Reactant or reagent)
(fluorination of, by hydrogen fluoride)

IT 51-21-8P 316-46-1P 2022-85-7P 2341-22-2P

66335-39-5P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

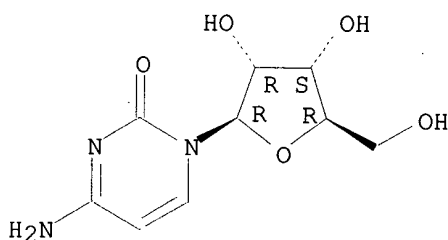
IT 65-46-3

RL: RCT (Reactant); RACT (Reactant or reagent)
(fluorination of, by acetic acid-hydrogen fluoride)

RN 65-46-3 HCAPLUS

CN Cytidine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



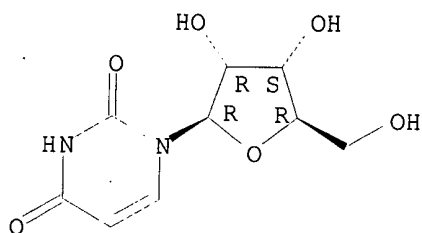
IT 58-96-8

RL: RCT (Reactant); RACT (Reactant or reagent)
(fluorination of, by hydrofluoric acid-acetic acid)

RN 58-96-8 HCAPLUS

CN Uridine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



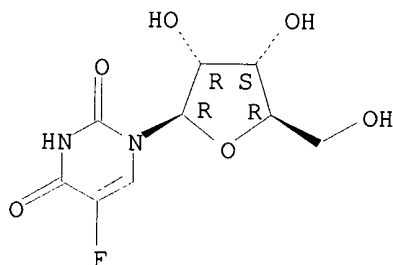
IT 316-46-1P 2341-22-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 316-46-1 HCAPLUS

CN Uridine, 5-fluoro- (6CI, 8CI, 9CI) (CA INDEX NAME)

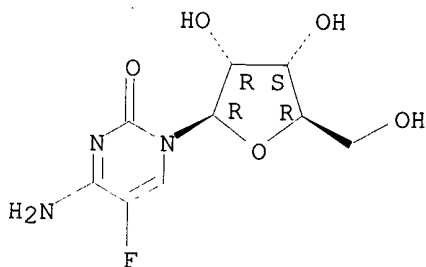
Absolute stereochemistry.



RN 2341-22-2 HCAPLUS

CN Cytidine, 5-fluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L75 ANSWER 18 OF 30 HCAPLUS COPYRIGHT 2003 ACS

AN 1986:497860 HCAPLUS

DN 105:97860

TI Synthesis of N4-mono- and dialkyl-2'-deoxycytidines and their insertion into an oligonucleotide

AU Kraszewski, A.; Delort, A. M.; Teoule, R.

CS Dep. Rech. Fond., Cent. Etud. Nucl. Grenoble, Grenoble, F-38041, Fr.

SO Tetrahedron Letters (1986), 27(7), 861-4

CODEN: TELEAY; ISSN: 0040-4039

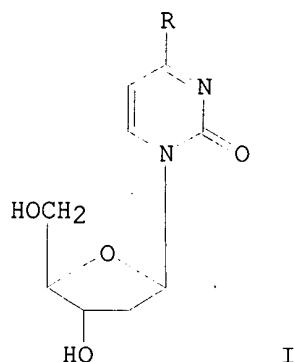
DT Journal

LA English

CC 33-9 (Carbohydrates)

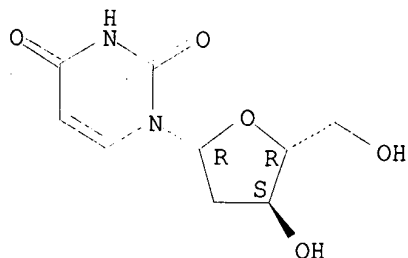
OS CASREACT 105:97860

GI



- AB Treatment of 3',5'-di-O-acetyl-4-thio-2'-deoxyuridine with mono or dialkylamines in EtOH gave 11 title deoxycytidines I (R = MeNH, Me₂CHNH, Me₂N, Et₂N, piperidino, etc.). I (R = MeNH) was incorporated into the oligonucleotide chain d(CGm4CGCG).
- ST deoxycytidine alkyl dialkyl; cytidine deoxy alkyl dialkyl; oligonucleotide alkyldeoxycytidine; nucleotide oligo alkyldeoxycytidine
- IT Nucleotides, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(oligo-, prepn. of, contg. N4-methyldeoxycytidine)
- IT **951-78-0**
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(acetylation of, in synthesis of alkyl deoxycytidines)
- IT 74-89-5, reactions 75-04-7, reactions 75-31-0, reactions 108-18-9
108-91-8, reactions 109-73-9, reactions 109-89-7, reactions
110-89-4, reactions 111-92-2 124-40-3, reactions 624-78-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(**amination** by, of thiodeoxyuridine diacetate, in synthesis of
alkyl deoxycytidine)
- IT 103931-23-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. and **amination** of, in synthesis of alkyl
deoxycytidines)
- IT **13030-62-1P**
RL: **RCT (Reactant);** SPN (Synthetic preparation); PREP
(Preparation); **RACT (Reactant or reagent)**
(prepn. and sulfuration of, in synthesis of alkyl deoxycytidines)
- IT 58927-26-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
- IT **22882-02-6P 53213-03-9P 70465-61-1P**
86811-97-4P 103931-24-4P 103931-25-5P
103931-26-6P 103931-27-7P 103931-28-8P
103931-29-9P 103931-30-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, from deoxyuridine)
- IT **951-78-0**
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(acetylation of, in synthesis of alkyl deoxycytidines)
- RN 951-78-0 HCAPLUS
- CN Uridine, 2'-deoxy- (6CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 13030-62-1P

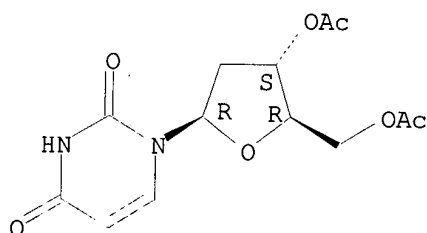
RL: **RCT (Reactant)**; SPN (Synthetic preparation); PREP(Preparation); **RACT (Reactant or reagent)**

(prepn. and sulfuration of, in synthesis of alkyl deoxycytidines)

RN 13030-62-1 HCAPLUS

CN Uridine, 2'-deoxy-, 3',5'-diacetate (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 22882-02-6P 53213-03-9P 70465-61-1P

86811-97-4P 103931-24-4P 103931-25-5P

103931-26-6P 103931-27-7P 103931-28-8P

103931-29-9P 103931-30-2P

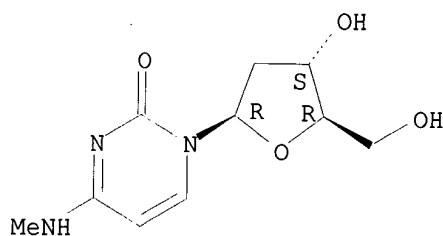
RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of, from deoxyuridine)

RN 22882-02-6 HCAPLUS

CN Cytidine, 2'-deoxy-N-methyl- (7CI, 8CI, 9CI) (CA INDEX NAME)

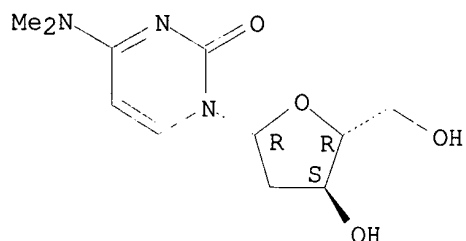
Absolute stereochemistry.



RN 53213-03-9 HCAPLUS

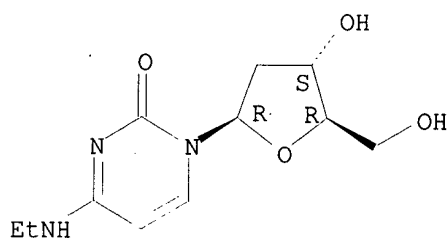
CN Cytidine, 2'-deoxy-N,N-dimethyl- (7CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



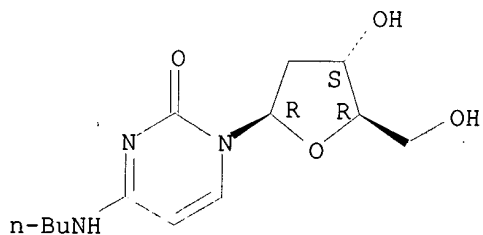
RN 70465-61-1 HCAPLUS
 CN Cytidine, 2'-deoxy-N-ethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



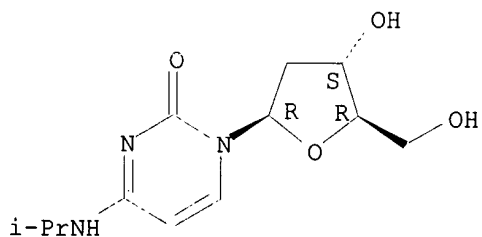
RN 86811-97-4 HCAPLUS
 CN Cytidine, N-butyl-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



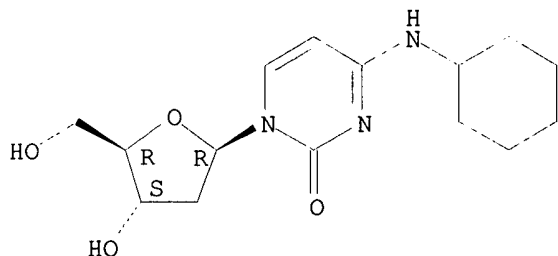
RN 103931-24-4 HCAPLUS
 CN Cytidine, 2'-deoxy-N-(1-methylethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 103931-25-5 HCAPLUS
 CN Cytidine, N-cyclohexyl-2'-deoxy- (9CI) (CA INDEX NAME)

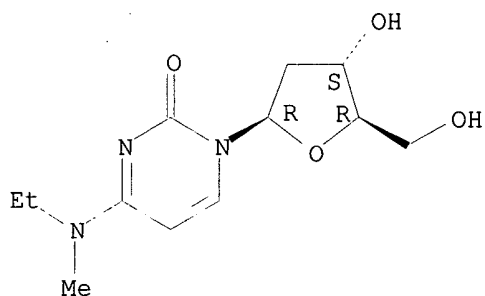
Absolute stereochemistry.



RN 103931-26-6 HCAPLUS

CN Cytidine, 2'-deoxy-N-ethyl-N-methyl- (9CI) (CA INDEX NAME)

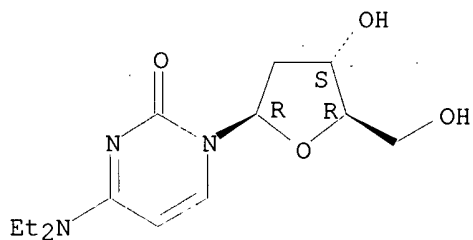
Absolute stereochemistry.



RN 103931-27-7 HCAPLUS

CN Cytidine, 2'-deoxy-N,N-diethyl- (9CI) (CA INDEX NAME)

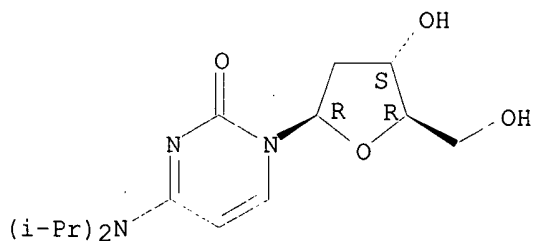
Absolute stereochemistry.



RN 103931-28-8 HCAPLUS

CN Cytidine, 2'-deoxy-N,N-bis(1-methylethyl)- (9CI) (CA INDEX NAME)

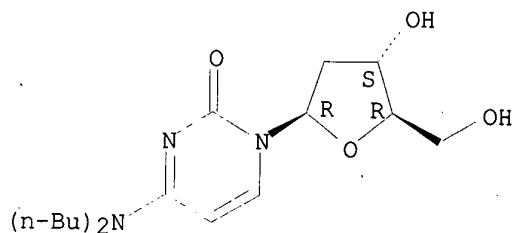
Absolute stereochemistry.



RN 103931-29-9 HCAPLUS

CN Cytidine, N,N-dibutyl-2'-deoxy- (9CI) (CA INDEX NAME)

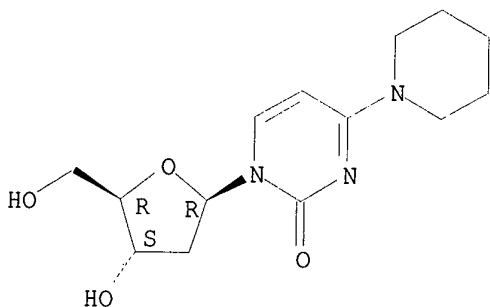
Absolute stereochemistry.



RN 103931-30-2 HCAPLUS

CN 2(1H)-Pyrimidinone, 1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L75 ANSWER 19 OF 30 HCAPLUS COPYRIGHT 2003 ACS

AN 1986:168734 HCAPLUS

DN 104:168734

TI Reaction of uracil nucleosides with 1-methylimidazole in the presence of phosphoryl chloride: a convenient method for the synthesis of 4-substituted pyrimidin-2(1H)-one nucleosides

AU Matsuda, Akira; Obi, Kokoh; Miyasaka, Tadashi

CS Sch. Pharm. Sci., Showa Univ., Tokyo, 142, Japan

SO Chemical & Pharmaceutical Bulletin (1985), 33(6), 2575-8

CODEN: CPBTAL; ISSN: 0009-2363

DT Journal

LA English

CC 33-9 (Carbohydrates)

OS CASREACT 104:168734

GI

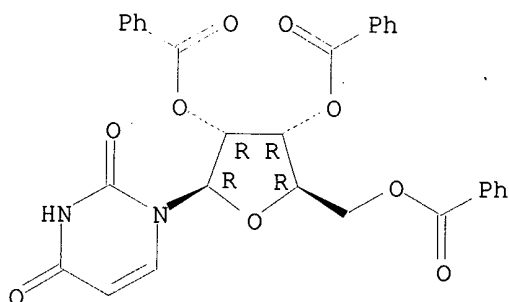
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Reaction of 2',3',5'-tri-O-benzoyluridine with 1-methylimidazole in the presence of POCl₃ in MeCN afforded imidazolium I. Nucleophilic substitutions of I with RH (R = MeO, p-ClC₆H₄S, EtS, Et₂N, CH₂:CHCH₂NH, and NH₂) yielded ribosides II. The method was also successful with 2'-deoxyribose III (R₁ = Me, iodo; R₂ = Ac, Bz).

ST benzoyluridine methylimidazole condensation; nucleophilic substitution

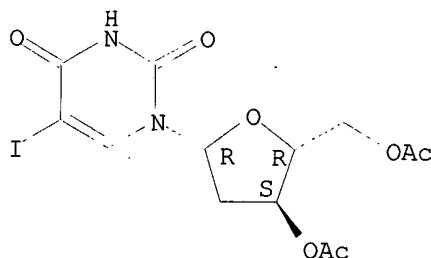
- methylimidazolylpyrimidinone nucleoside
- IT Substitution reaction, nucleophilic
(of (methylimidazolyl)pyrimidinone nucleosides with thiols and amines)
- IT Nucleosides, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactions of uracil, with methylimidazole)
- IT 1748-04-5 1956-30-5 35898-30-7 98495-56-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(phosphoryl chloride-catalyzed condensation of, with methylimidazole)
- IT 616-47-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(phosphoryl chloride-catalyzed condensation of, with tribenzoyluridine)
- IT 99679-98-8P 99680-05-4P 99680-07-6P
99692-47-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and imidazolyl substitution of)
- IT 2873-31-6P 15049-50-0P 31652-74-1P 99679-99-9P 99680-00-9P
99680-01-0P 99680-02-1P 99680-03-2P 99680-04-3P
99680-06-5P 99680-08-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
- IT 1748-04-5 1956-30-5 35898-30-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(phosphoryl chloride-catalyzed condensation of, with methylimidazole)
- RN 1748-04-5 HCAPLUS
- CN Uridine, 2',3',5'-tribenzoate (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



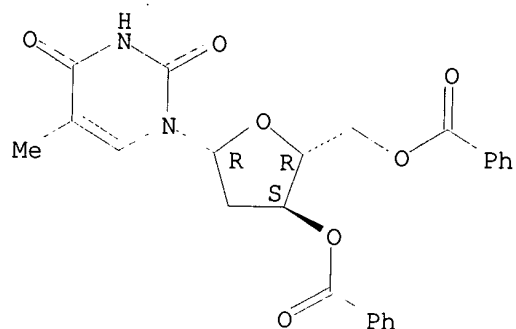
- RN 1956-30-5 HCAPLUS
- CN Uridine, 2'-deoxy-5-iodo-, 3',5'-diacetate (7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



- RN 35898-30-7 HCAPLUS
- CN Thymidine, 3',5'-dibenzoate (6CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



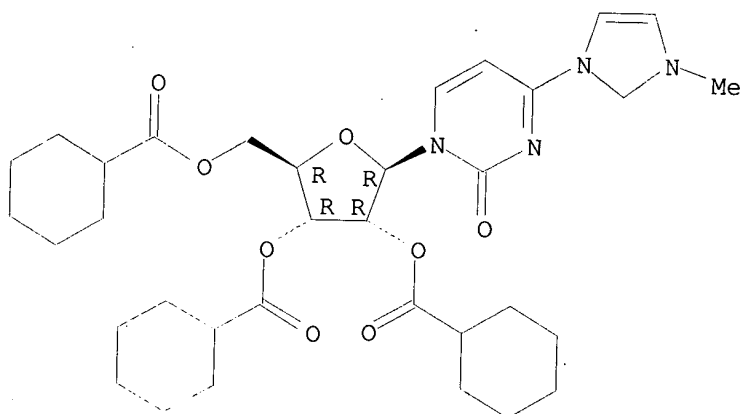
IT 99679-98-8P 99680-05-4P 99692-47-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and imidazolyl substitution of)

RN 99679-98-8 HCAPLUS

CN 1H-Imidazolium, 1-[1,2-dihydro-2-oxo-1-(2,3,5-tri-O-benzoyl-.beta.-D-ribofuranosyl)-4-pyrimidinyl]-3-methyl-, chloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



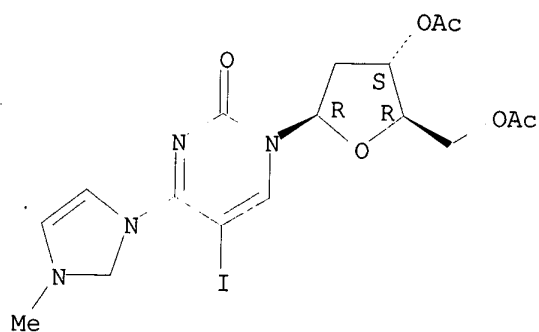
● Cl⁻

*** FRAGMENT DIAGRAM IS INCOMPLETE ***

RN 99680-05-4 HCAPLUS

CN 1H-Imidazolium, 1-[1-(3,5-di-O-acetyl-2-deoxy-.beta.-D-erythro-pentofuranosyl)-1,2-dihydro-5-iodo-2-oxo-4-pyrimidinyl]-3-methyl-, chloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



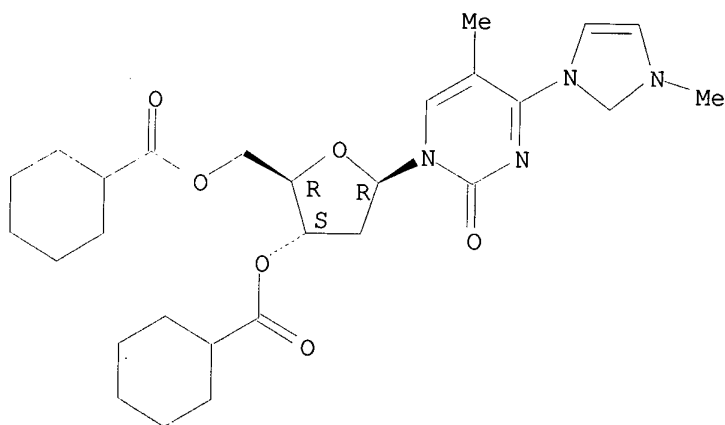
● Cl⁻

*** FRAGMENT DIAGRAM IS INCOMPLETE ***

RN 99692-47-4 HCAPLUS

CN 1H-Imidazolium, 1-[1-(3,5-di-O-benzoyl-2-deoxy-.beta.-D-erythro-pentofuranosyl)-1,2-dihydro-5-methyl-2-oxo-4-pyrimidinyl]-3-methyl-, chloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● Cl⁻

*** FRAGMENT DIAGRAM IS INCOMPLETE ***

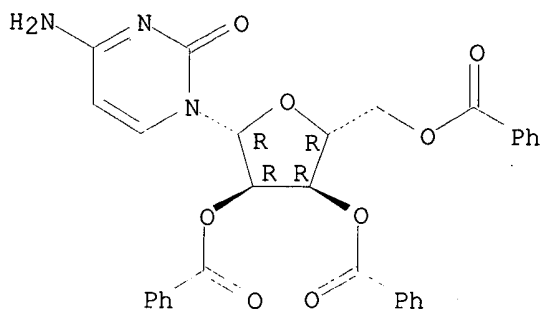
IT 31652-74-1P 99680-01-0P 99680-02-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 31652-74-1 HCAPLUS

CN Cytidine, 2',3',5'-tribenzoate (8CI, 9CI) (CA INDEX NAME)

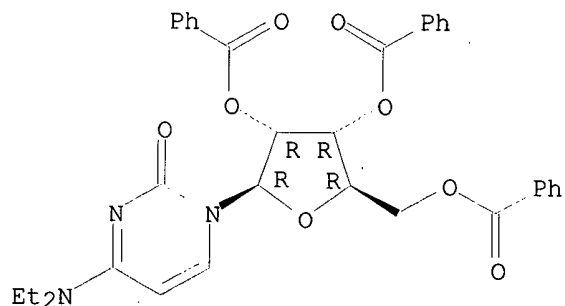
Absolute stereochemistry.



RN 99680-01-0 HCAPLUS

CN Cytidine, N,N-diethyl-, 2',3',5'-tribenzoate (9CI) (CA INDEX NAME)

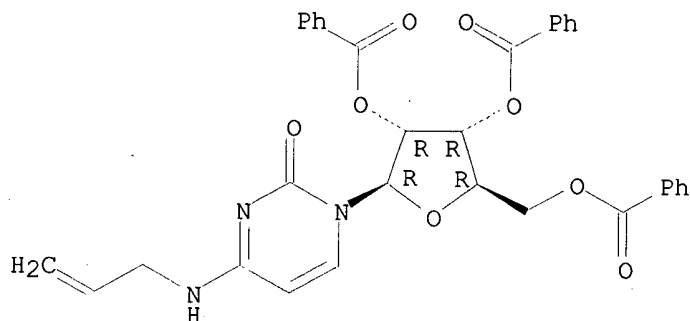
Absolute stereochemistry.



RN 99680-02-1 HCAPLUS

CN Cytidine, N-2-propenyl-, 2',3',5'-tribenzoate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L75 ANSWER 20 OF 30 HCAPLUS COPYRIGHT 2003 ACS

AN 1986:82007 HCAPLUS

DN 104:82007

TI Systematic synthesis and biological evaluation of .alpha.- and .beta.-D-xylofuranosyl nucleosides of the five naturally occurring bases in nucleic acids and related analogs

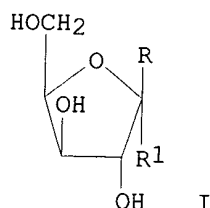
AU Gosselin, Gilles; Bergogne, Marie Christine; De Rudder, Jean; De Clercq, Erik; Imbach, Jean Louis

CS Lab. Chim. Bio-Org., Univ. Sci. Tech. Languedoc, Montpellier, 34060, Fr.

SO Journal of Medicinal Chemistry (1986), 29(2), 203-13

CODEN: JMCMAR; ISSN: 0022-2623

DT Journal
 LA English
 CC 1-12 (Pharmacology)
 Section cross-reference(s): 33
 GI

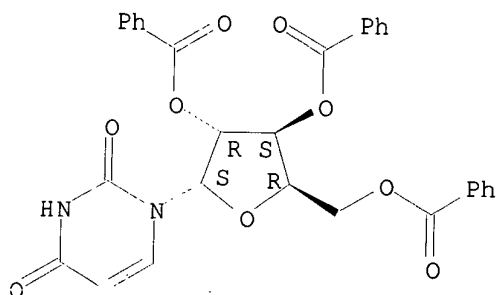


- AB .alpha.- And .beta.-D-xylofuranosyl nucleosides (I; R = H, 9-adeninyl, 1-cytosinyl, 1-uracidyl, 1-thyminyl, 9-(2-amino-6-chloropurinyl), etc. and R1 = H, 9-adeninyl, 1-cytosinyl, or 4-carbamoyl-5-aminoimidazolyl) were prepd. (.beta.-anomers by glycosylation of the purine and pyrimidine aglycons with 1-O-acetyl-2,3,5-tri-O-benzoyl-.alpha.-D-xylofuranose [20822-87-1] or 1,2-di-O-acetyl-3,5-di-O-benzoyl-.alpha.-D-xylofuranose [83434-58-6] followed by deblocking; .alpha.-anomers by multistep synthesis starting with the appropriate amino- or mercaptoxylofuranooxazolines) and tested for acute toxicity and therapeutic activity against herpetic encephalitis in mice, antiviral action in vitro, cytotoxicity to myeloma SP2 cells in suspension culture, and inhibitory activity against macromol. synthesis in rabbit kidney cells in primary culture. Three I, .beta.-D-xylofuranosyl nucleosides of adenine, guanine, and cytosine, showed marked biol. activity.
- ST xylofuranosyl nucleoside prepn biol activity; antiviral xylofuranosyl nucleoside; antitumor xylofuranosyl nucleoside; toxicity xylofuranosyl nucleoside; cytotoxicity xylofuranosyl nucleoside; macromol formation xylofuranosyl nucleoside
- IT Encephalitis
 (from herpes virus, xylofuranosyl nucleosides treatment of)
- IT Deoxyribonucleic acid formation
 Protein formation
 Ribonucleic acid formation
 (inhibition of, by xylofuranosyl nucleosides)
- IT Neoplasm inhibitors
 Virucides and Virustats
 (xylofuranosyl nucleosides)
- IT Toxicity
 (acute, of xylofuranosyl nucleosides)
- IT Nucleosides, preparation
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (xylofuranosyl, prepn. and neoplasm-inhibiting and antiviral and cytotoxic activities of)
- IT 110-89-4, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (Mannich reaction of, with xylofuranosyluracil)
- IT 65-71-4 66-22-8, biological studies 71-30-7 73-24-5, biological studies 10310-21-1
 RL: BIOL (Biological study)
 (condensation of, with peracylated xylofuranoses)
- IT 58-86-6, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (conversion of, to oxazoline)
- IT 20822-87-1 83434-58-6
 RL: BIOL (Biological study)
 (glycosylation of purines and pyrimidines with)

- IT 99355-43-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and **amination** of)
- IT 99355-42-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and base-catalyzed cyclization and deprotection of)
- IT 99436-42-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and conversion to oxazoline)
- IT **77180-84-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and conversion to thiouracil deriv.)
- IT 99376-19-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and cyclization with triethylformate)
- IT 99355-39-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and deacetylation of)
- IT 99355-37-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and dehydration of)
- IT **52448-07-4P** 83373-05-1P **99355-30-3P**
99355-31-4P 99355-32-5P 99355-33-6P 99355-40-5P
RL: **RCT (Reactant)**; SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(prepn. and deprotection of)
- IT 99355-36-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and desilylation or acetylation of or reaction benzoylisothiocyanate)
- IT 99355-44-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and hydrogenolysis of)
- IT 99355-41-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and methylation of)
- IT 58-86-6DP, purine and pyrimidine nucleosides 524-69-6P 2946-52-3P
3530-56-1P **16535-78-7P** 26017-62-9P 27462-39-1P
52486-19-8P 53294-14-7P **89618-08-6P** 99355-34-7P
99436-41-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and neoplasm-inhibiting and antiviral and cytotoxic activities of)
- IT **41545-82-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and protection or Mannich reaction with piperidine)
- IT 41545-78-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction with Me propiolate)
- IT 99436-43-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction with aminocyanoacetamide or hydrolysis of)
- IT 99355-38-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction with formamidine acetate or deacetylation of)

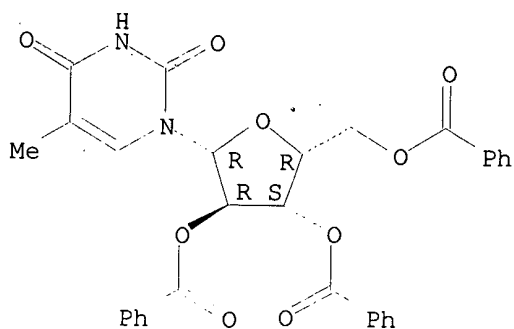
- IT 41545-80-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and ring-opening of)
- IT 89595-52-8P 89596-51-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and substitution reaction with thiourea)
- IT 27462-38-0P **77172-20-4P** 99355-35-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
- IT 3473-63-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with [acetylbis(butyldimethylsilyl)xylofuranosyl]cyanoaminoimidazole)
- IT 532-55-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with [bis(butyldimethylsilyl)xylofuranosyl]carbamoylaminoimidazole)
- IT 922-67-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with aminoxylofuranoxazoline)
- IT 6719-21-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with bis(butyldimethylsilyl)xylofuranoxazoline)
- IT 2810-85-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(silylation of)
- IT 62-56-6, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(substitution reaction of, with aminochloropurine xylofuranosides)
- IT 122-51-0
RL: BIOL (Biological study)
(xylofuranosylcyanoaminoimidazole cyclization with)
- IT **77180-84-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and conversion to thiouracil deriv.)
- RN 77180-84-8 HCAPLUS
- CN 2,4(1H,3H)-Pyrimidinedione, 1-(2,3,5-tri-O-benzoyl-.alpha.-D-xylofuranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



- IT **52448-07-4P 99355-30-3P 99355-31-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and deprotection of)
- RN 52448-07-4 HCAPLUS
- CN 2,4(1H,3H)-Pyrimidinedione, 5-methyl-1-(2,3,5-tri-O-benzoyl-.beta.-D-xylofuranosyl)- (9CI) (CA INDEX NAME)

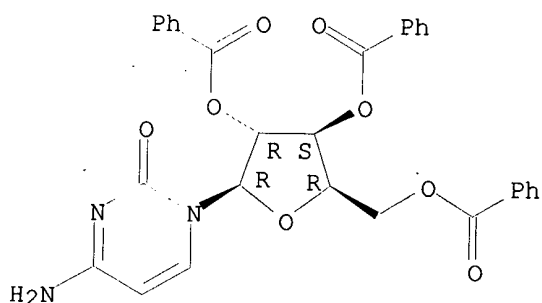
Absolute stereochemistry.



RN 99355-30-3 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-1-(2,3,5-tri-O-benzoyl-.beta.-D-xylofuranosyl)-(9CI) (CA INDEX NAME)

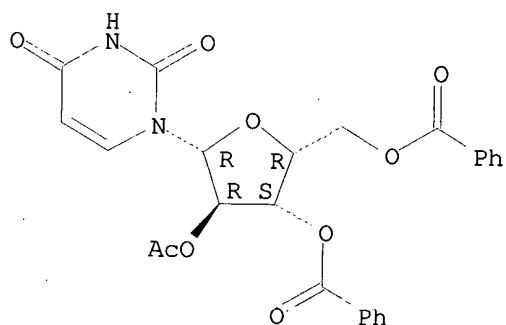
Absolute stereochemistry.



RN 99355-31-4 HCAPLUS

CN 2,4(1H,3H)-Pyrimidinedione, 1-(2-O-acetyl-3,5-di-O-benzoyl-.beta.-D-xylofuranosyl)-(9CI) (CA INDEX NAME)

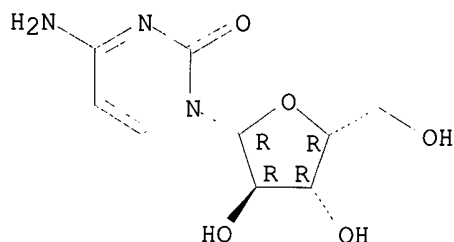
Absolute stereochemistry.

IT 3530-56-1P 16535-78-7P 52486-19-8P
89618-08-6PRL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and neoplasm-inhibiting and antiviral and cytotoxic activities
of)

RN 3530-56-1 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-1-.beta.-D-xylofuranosyl-(9CI) (CA INDEX
NAME)

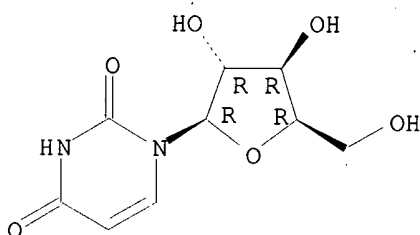
Absolute stereochemistry.



RN 16535-78-7 HCAPLUS

CN 2,4(1H,3H)-Pyrimidinedione, 1-.beta.-D-xylofuranosyl- (9CI) (CA INDEX NAME)

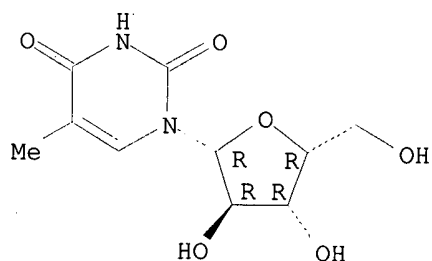
Absolute stereochemistry.



RN 52486-19-8 HCAPLUS

CN 2,4(1H,3H)-Pyrimidinedione, 5-methyl-1-.beta.-D-xylofuranosyl- (9CI) (CA INDEX NAME)

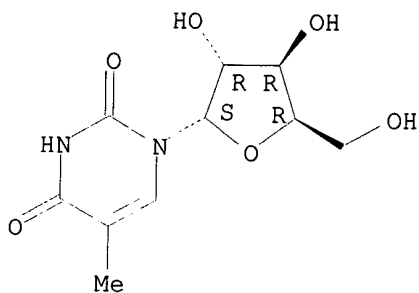
Absolute stereochemistry.



RN 89618-08-6 HCAPLUS

CN 2,4(1H,3H)-Pyrimidinedione, 5-methyl-1-.alpha.-D-xylofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



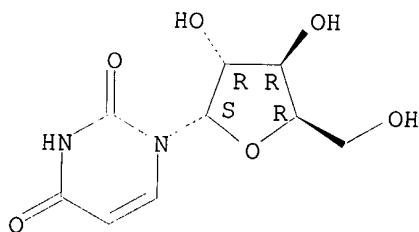
IT 41545-82-8P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and protection or Mannich reaction with piperidine)

RN 41545-82-8 HCAPLUS

CN 2,4(1H,3H)-Pyrimidinedione, 1-.alpha.-D-xylofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



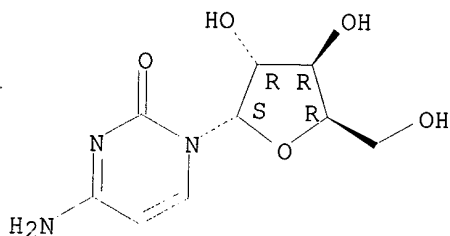
IT 77172-20-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 77172-20-4 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-1-.alpha.-D-xylofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L75 ANSWER 21 OF 30 HCAPLUS COPYRIGHT 2003 ACS

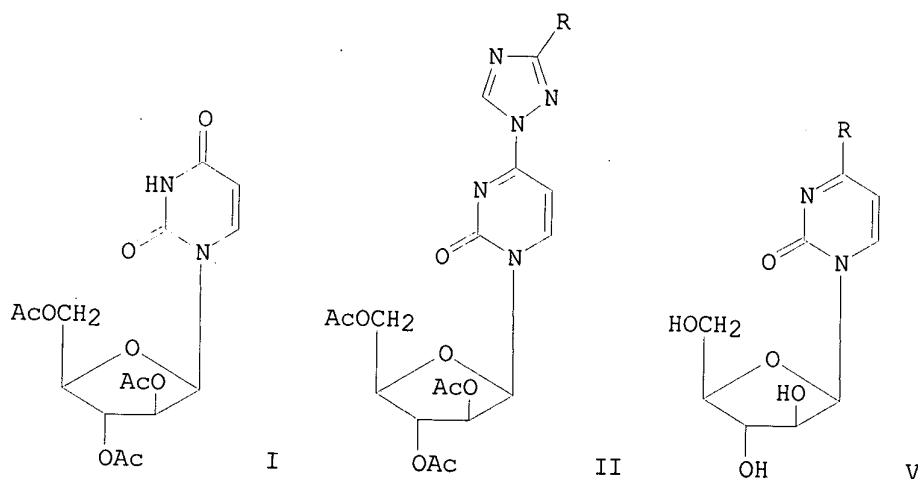
AN 1982:510325 HCAPLUS

DN 97:110325

TI 4-(1,2,4-Triazol-1-yl)- and 4-(3-nitro-1,2,4-triazol-1-yl)-1-(.beta.-D-2,3,5-tri-O-acetyl-arabinofuranosyl)pyrimidin-2(1H)-ones. Valuable intermediates in the synthesis of derivatives of 1-(.beta.-D-arabinofuranosyl)cytosine (ara-C)

AU Divakar, K. J.; Reese, Colin B.

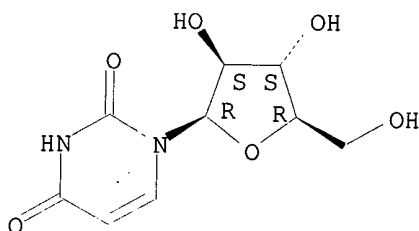
CS Dep. Chem., King's Coll., London, WC2R 2LS, UK
 SO Journal of the Chemical Society, Perkin Transactions 1: Organic and
 Bio-Organic Chemistry (1972-1999) (1982), (5), 1171-6
 CODEN: JCPRB4; ISSN: 0300-922X
 DT Journal
 LA English
 CC 33-9 (Carbohydrates)
 Section cross-reference(s): 23, 25, 28
 GI



- AB Condensation reactions of triacetyluracil (I), prepd. in 3 steps from uracil, with tri(1H-1,2,4-triazol-1-yl)phosphine oxide and with 3-nitro-1,2,4-triazole and (PhO)₂POCl gave the title compds. II (R = H, NO₂) (III and IV, resp.). Substitution reactions of III with RH (R = NH₂, NHMe, NMe₂, morpholino, PhNH, p-MeC₆H₄S) gave the corresponding arabinofuranosylcytosines V in high yield. Substitution of IV with PhNH₂ and with H₂NCH₂CO₂Me gave V (R = PhNH, NHCH₂CO₂Me, resp.).
- ST arabinofuranosyluracil prepn condensation triazole; triazolylarabinofuranosylpyrimidinone prepn substitution; cytosine arabinofuranosyl
- IT Nucleosides, preparation
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (arabinofuranosylcytosines, prepn. of, by substitution reactions of triazolyl(triacetyluracil)pyrimidinones with **amines**)
- IT Substitution reaction, nucleophilic
 (of triazolyl(triacetyluracil)pyrimidinones, with **amines** and with toluenethiol)
- IT 24807-55-4 72741-18-5
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (condensation reaction of, with (triacetyluracil)uracil)
- IT 66-22-8, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (cyclocondensation reaction of, intramol.)
- IT 3083-77-0P
 RL: RCT (**Reactant**); SPN (Synthetic preparation); PREP (Preparation); RACT (**Reactant or reagent**)
 (prepn. and acetylation of)
- IT 14057-18-2P
 RL: RCT (**Reactant**); SPN (Synthetic preparation); PREP (Preparation); RACT (**Reactant or reagent**)
 (prepn. and condensation reactions of, with tritriazolylphosphine oxide)

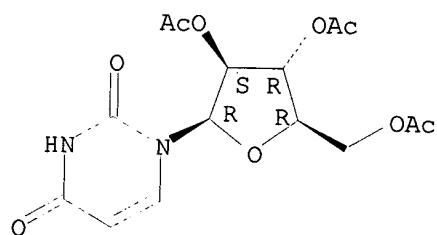
- and nitrotriazole)
- IT 3736-77-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and hydrolysis of)
- IT 82855-62-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and substitution reactions of, with **amines** and with toluenethiol)
- IT 82855-63-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and substitution reactions of, with aniline and with glycine Me ester)
- IT 147-94-4P 13491-42-4P 82855-64-9P
82855-65-0P 82855-66-1P 82855-67-2P 82855-68-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
- IT 74-89-5, reactions 106-45-6 110-91-8, reactions 124-40-3, reactions 616-34-2 7664-41-7, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(substitution reaction of, with triazolyl(triacetylarabinofuranosyl)pyrimidinone)
- IT 62-53-3, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(substitution reactions of, with triazolyl(triacetylarabinofuranosyl)pyrimidinones)
- IT 3083-77-0P
RL: **RCT (Reactant)**; SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(prepn. and acetylation of)
- RN 3083-77-0 HCAPLUS
- CN 2,4(1H,3H)-Pyrimidinedione, 1-.beta.-D-arabinofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



- IT 14057-18-2P
RL: **RCT (Reactant)**; SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(prepn. and condensation reactions of, with tritriazolylphosphine oxide and nitrotriazole)
- RN 14057-18-2 HCAPLUS
- CN 2,4(1H,3H)-Pyrimidinedione, 1-(2,3,5-tri-O-acetyl-.beta.-D-arabinofuranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 82855-62-7P

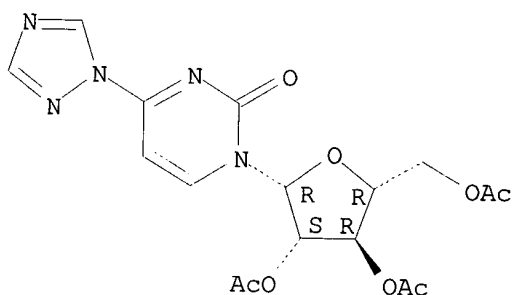
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and substitution reactions of, with **amines** and with toluenethiol)

RN 82855-62-7 HCAPLUS

CN 2(1H)-Pyrimidinone, 1-(2,3,5-tri-O-acetyl-.beta.-D-arabinofuranosyl)-4-(1H-1,2,4-triazol-1-yl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 82855-63-8P

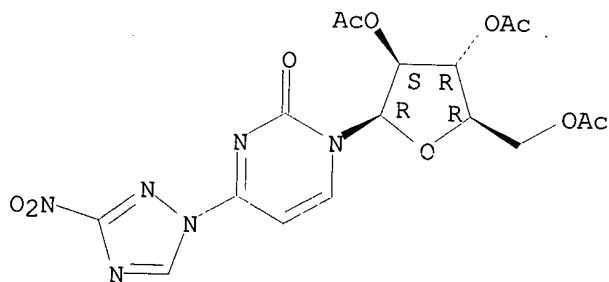
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and substitution reactions of, with aniline and with glycine Me ester)

RN 82855-63-8 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-(3-nitro-1H-1,2,4-triazol-1-yl)-1-(2,3,5-tri-O-acetyl-.beta.-D-arabinofuranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 147-94-4P 13491-42-4P 82855-64-9P

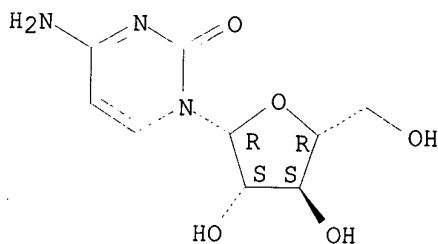
82855-65-0P 82855-66-1P

RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)

RN 147-94-4 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-1-.beta.-D-arabinofuranosyl- (9CI) (CA INDEX NAME)

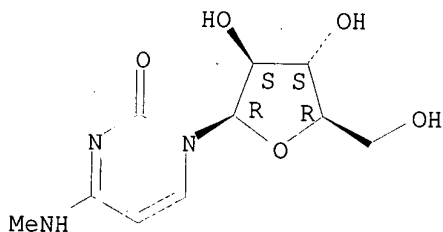
Absolute stereochemistry.



RN 13491-42-4 HCAPLUS

CN 2(1H)-Pyrimidinone, 1-.beta.-D-arabinofuranosyl-4-(methylamino)- (9CI) (CA INDEX NAME)

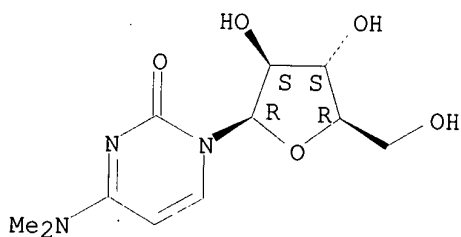
Absolute stereochemistry.



RN 82855-64-9 HCAPLUS

CN 2(1H)-Pyrimidinone, 1-.beta.-D-arabinofuranosyl-4-(dimethylamino)- (9CI) (CA INDEX NAME)

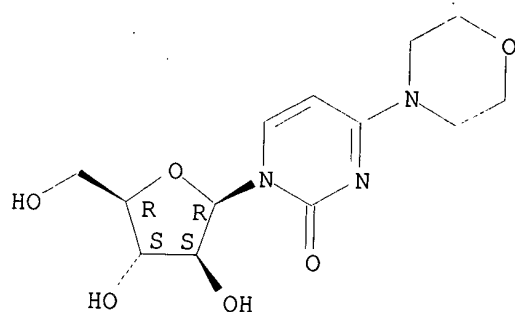
Absolute stereochemistry.



RN 82855-65-0 HCAPLUS

CN 2(1H)-Pyrimidinone, 1-.beta.-D-arabinofuranosyl-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

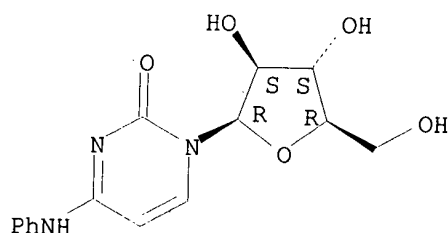
Absolute stereochemistry.



RN 82855-66-1 HCAPLUS

CN 2(1H)-Pyrimidinone, 1-.beta.-D-arabinofuranosyl-4-(phenylamino)- (9CI)
(CA INDEX NAME)

Absolute stereochemistry.



L75 ANSWER 22 OF 30 HCAPLUS COPYRIGHT 2003 ACS

AN 1981:121849 HCAPLUS

DN 94:121849

TI Methylation study of ribonucleosides, deoxyribonucleosides, and 2'-O-methylribonucleosides with trimethylsulfonium hydroxide and trimethylsulfonium iodide. Influence of the 2'-hydroxy-groups on the reactivity of the base moieties of ribonucleosides

AU Yamauchi, Kiyoshi; Nakagima, Toru; Kinoshita, Masayoshi

CS Dep. Appl. Chem., Osaka City Univ., Osaka, 558, Japan

SO Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1980), (12), 2787-92
CODEN: JCPRB4; ISSN: 0300-922X

DT Journal

LA English

CC 33-7 (Carbohydrates)

Section cross-reference(s): 22

AB The methylation reactions were examd. of the nucleosides adenosine (I), guanosine (II), cytidine (III), uridine (IV), and inosine, the deoxy derivs. of I, II, III, IV, and thymidine, and the 2'-O-Me derivs. of I, III, and IV with Me₃SOH and Me₃SI (DMF, 70-85.degree., 1-3.5 h). The deoxy and 2'-O-Me derivs. showed very similar behavior both in reactivity of the base moiety and in the methylation pattern, but the nucleosides had a much less reactive base group and gave different methylation products. The reactivities are discussed in terms of intramol. H-bonding between the 2'-OH and amine groups. The methylating characteristics of Me₃SOH and Me₃SI are also described. Kinetic studies indicated an S_N2 mechanism for methylation of nucleosides by Me₃S⁺ ion.

ST nucleoside methylation trimethylsulfonium kinetics; ribonucleoside methylation trimethylsulfonium kinetics; deoxyribonucleoside methylation trimethylsulfonium kinetics; methylribonucleoside methylation trimethylsulfonium kinetics; methylsulfonium methylation ribonucleoside

- kinetics; hydrogen bond nucleoside methylation
- IT Kinetics of methylation
Methylation
(of ribonucleosides by trimethylsulfonium ion)
- IT Nucleosides, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(deoxyribo-, methylation of, by trimethylsulfonium ion, kinetics of)
- IT Nucleosides, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(ribo-, methylation of, by trimethylsulfonium ion, kinetics of)
- IT 2181-42-2 17287-03-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(methylation by, of ribonucleosides, kinetics of)
- IT 50-89-5, reactions 58-61-7, reactions 58-63-9 58-96-8
65-46-3 118-00-3, reactions 951-77-9 951-78-0
958-09-8 961-07-9 2140-72-9 2140-76-3 2140-79-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(methylation of, by trimethylsulfonium ion, kinetics of)
- IT 76551-26-3P 76551-27-4P 76551-28-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
- IT 1867-73-8P 10300-22-8P 15763-06-1P 60037-52-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, by methylation of adenosine)
- IT 57817-83-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, by methylation of adenosine and methyladenosine)
- IT 20594-00-7P 76567-64-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, by methylation of cytidine)
- IT 2002-35-9P 3413-67-0P 35665-58-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, by methylation of deoxyadenosine)
- IT 22882-02-6P 76551-25-2P 76567-65-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, by methylation of deoxycytidine)
- IT 5132-79-6P 26718-69-4P 76551-22-9P 76551-23-0P 76551-24-1P
76567-63-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, by methylation of deoxyguanosine)
- IT 958-74-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, by methylation of deoxythymidine)
- IT 24514-32-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, by methylation of deoxyuridine)
- IT 2140-65-0P 2140-71-8P 10300-27-3P 15313-37-8P 73667-71-7P
74466-66-3P 76551-21-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, by methylation of guanosine)
- IT 2140-73-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, by methylation of inosine)
- IT 20649-46-1P 30891-53-3P 76567-62-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, by methylation of methyladenosine)
- IT 13048-95-8P 34218-86-5P 76567-66-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, by methylation of methylcytidine)
- IT 7103-27-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, by methylation of methyluridine)
- IT 2140-69-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, by methylation of uridine)

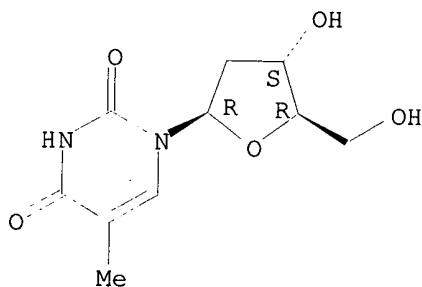
IT 50-89-5, reactions 58-96-8 65-46-3
951-77-9 951-78-0 2140-72-9 2140-76-3

RL: RCT (Reactant); RACT (Reactant or reagent)
(methylation of, by trimethylsulfonium ion, kinetics of)

RN 50-89-5 HCAPLUS

CN Thymidine (8CI, 9CI) (CA INDEX NAME)

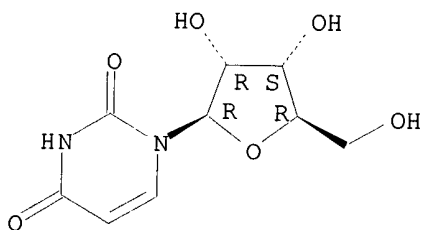
Absolute stereochemistry.



RN 58-96-8 HCAPLUS

CN Uridine (8CI, 9CI) (CA INDEX NAME)

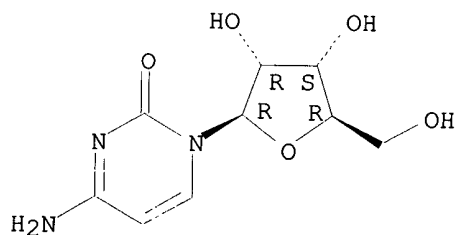
Absolute stereochemistry.



RN 65-46-3 HCAPLUS

CN Cytidine (8CI, 9CI) (CA INDEX NAME)

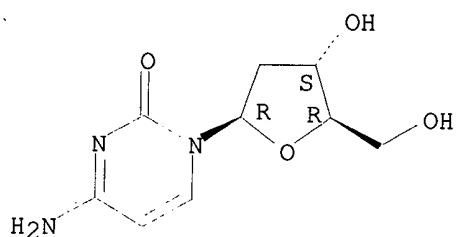
Absolute stereochemistry.



RN 951-77-9 HCAPLUS

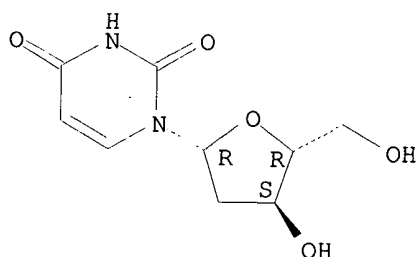
CN Cytidine, 2'-deoxy- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



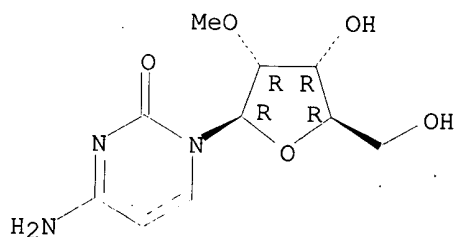
RN 951-78-0 HCAPLUS
 CN Uridine, 2'-deoxy- (6CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



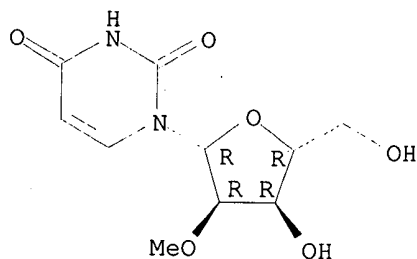
RN 2140-72-9 HCAPLUS
 CN Cytidine, 2'-O-methyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 2140-76-3 HCAPLUS
 CN Uridine, 2'-O-methyl- (7CI, 8CI, 9CI) (CA INDEX NAME)

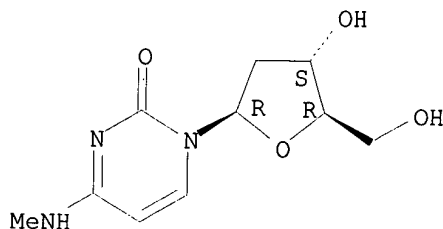
Absolute stereochemistry.



IT **22882-02-6P**
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, by methylation of deoxycytidine)

RN 22882-02-6 HCAPLUS
 CN Cytidine, 2'-deoxy-N-methyl- (7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



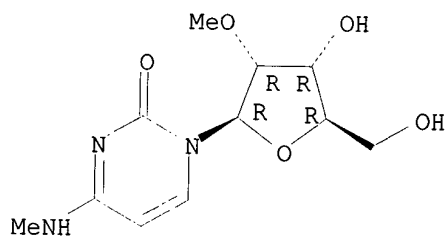
IT 13048-95-8P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, by methylation of methylcytidine)

RN 13048-95-8 HCAPLUS

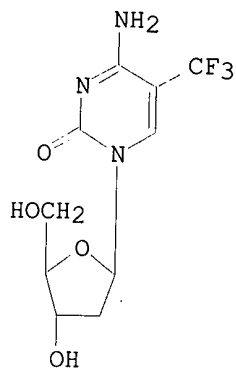
CN Cytidine, N-methyl-2'-O-methyl- (7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L75 ANSWER 23 OF 30 HCAPLUS COPYRIGHT 2003 ACS
 AN 1980:592052 HCAPLUS
 DN 93:192052
 TI Antiviral composition and method of treating virus diseases
 IN Greer, Sheldon
 PA University of Miami, USA; PCR Inc.
 SO U.S., 11 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 IC A61K031-70; C07H017-00
 NCL 424180000
 CC 63-6 (Pharmaceuticals)
 Section cross-reference(s): 3, 33
 FAN.CNT 2

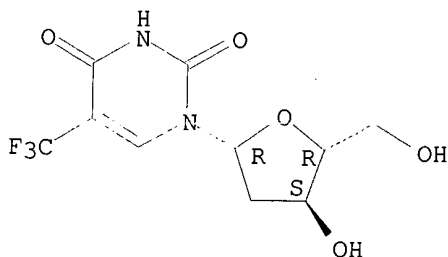
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4210638	A	19800701	US 1978-887541	19780317 <--
	GB 1588550	A	19810423	GB 1978-24858	19780531 <--
	DE 2838644	A1	19790927	DE 1978-2838644	19780905 <--
	DE 2838644	C2	19890202		
	GB 2021097	A	19791128	GB 1979-9319	19790316 <--
	GB 2021097	B2	19821006		
PRAI	US 1978-887541		19780317	<--	
	US 1978-887555		19780317	<--	
	US 1978-887745		19780317	<--	
GI					



I

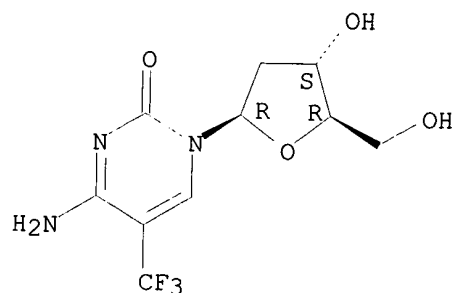
- AB A combination of 5-trifluoromethyl-2'-deoxycytidine (I) [66384-66-5] and a cytidine deaminase inhibitor, such as tetrahydrouridine [18771-50-1] or 2'-deoxytetrahydrouridine [31962-88-6] is an effective virucide, esp. for Herpes simplex. I was prepd. by treating 5-trifluoromethyl-2'-deoxyuridine [70-00-8], in which the free hydroxy groups have been protected (silylated), with NH₃.
- ST virucide trifluoromethyldeoxycytidine; tetrahydrouridine trifluoromethyldeoxycytidine virucide
- IT Virucides and Virustats
(trifluoromethyldeoxycytidine-cytidine deaminase inhibitor compns.)
- IT 70-00-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(amination of, in trifluoromethyldeoxycytidine virucide prepn.)
- IT 66384-66-5P
RL: PREP (Preparation)
(prepn. and virucidal compns. contg. cytidine deaminase inhibitor and)
- IT 18771-50-1 31962-88-6
RL: BIOL (Biological study)
(virucidal compns. contg. trifluoromethyldeoxycytidine and)
- IT 70-00-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(amination of, in trifluoromethyldeoxycytidine virucide prepn.)
- RN 70-00-8 HCAPLUS
- CN Thymidine, .alpha.,.alpha.,.alpha.-trifluoro- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



- IT 66384-66-5P
RL: PREP (Preparation)
(prepn. and virucidal compns. contg. cytidine deaminase inhibitor and)
- RN 66384-66-5 HCAPLUS
- CN Cytidine, 2'-deoxy-5-(trifluoromethyl)- (9CI) (CA INDEX NAME)

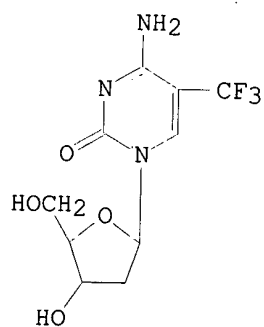
Absolute stereochemistry.



L75 ANSWER 24 OF 30 HCAPLUS COPYRIGHT 2003 ACS
 AN 1980:129265 HCAPLUS
 DN 92:129265
 TI 5-Trifluoromethyl-2'-deoxycytidine
 IN Greer, Sheldon B.; Stump, Eugene G., Jr.; Psarras, Theodore
 PA PCR Inc., USA; University of Miami
 SO Ger. Offen., 42 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 IC C07H019-06
 CC 33-7 (Carbohydrates)
 Section cross-reference(s): 63

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2838644	A1	19790927	DE 1978-2838644	19780905 <--
	DE 2838644	C2	19890202		
	US 4210638	A	19800701		
	JP 54128587	A2	19791005		
PRAI	US 1978-887541		19780317	JP 1978-109549	19780906 <--
	US 1978-887555		19780317		
	US 1978-887745		19780317		
GI					

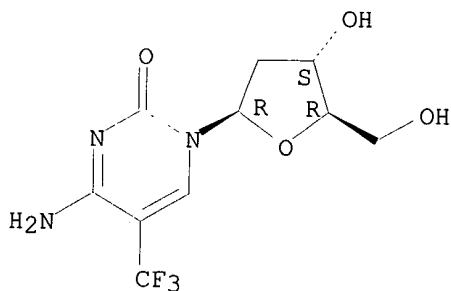


I

AB Title compd. I was prepd. by silylation of 5-trifluoromethyl-2'-deoxyuridine with $\text{HN}(\text{SiMe}_3)_2$ followed by treatment with $\text{NH}_3\text{-NH}_4\text{Cl}$. I is virucidal against Herpes viruses and in the presence of a cytidine deaminase inhibitor has a lower cytotoxicity and greater stability than known compds., such as trifluorothymidine.

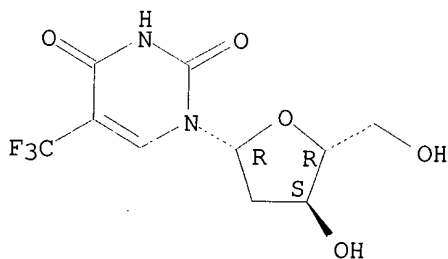
ST fluoromethyldeoxycytidine; deoxycytidine trifluoromethyl; virucide
trifluoromethyldeoxycytidine
IT Virucides and Virustats
(trifluorodeoxycytidine)
IT **66384-66-5P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(prepn. and virucidal activity of)
IT **70-00-8**
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(silylation and **amination** of)
IT **66384-66-5P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(prepn. and virucidal activity of)
RN 66384-66-5 HCAPLUS
CN Cytidine, 2'-deoxy-5-(trifluoromethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



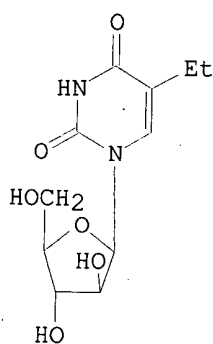
IT **70-00-8**
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(silylation and **amination** of)
RN 70-00-8 HCAPLUS
CN Thymidine, .alpha.,.alpha.,.alpha.-trifluoro- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L75 ANSWER 25 OF 30 HCAPLUS COPYRIGHT 2003 ACS
AN 1979:413506 HCAPLUS
DN 91:13506
TI Synthesis and antiviral activities of arabinofuranosyl-5-ethylpyrimidine nucleosides. Selective antiherpes activity of 1-(.beta.-D-arabinofuranosyl)-5-ethyluracil
AU Kulikowski, Tadeusz; Zawadzki, Zbigniew; Shugar, David; Descamps, Johan; De Clercq, Erik

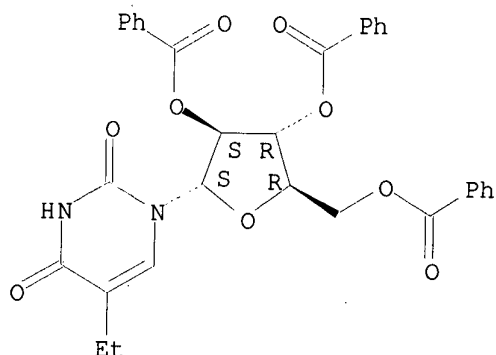
CS Inst. Biochem. Biophys., Pol. Acad. Sci., Warsaw, Pol.
 SO Journal of Medicinal Chemistry (1979), 22(6), 647-53
 CODEN: JMCMAR; ISSN: 0022-2623
 DT Journal
 LA English
 CC 1-4 (Pharmacodynamics)
 Section cross-reference(s): 33
 GI



- AB Arabinofuranosyl-5-ethylpyrimidine nucleosides were prepd. by several procedures and their activities tested in primary rabbit kidney cells and in human skin fibroblasts. 1-.beta.-D-Arabinsfuranosyl-5-ethyluracil (I) [70020-72-3], prepd. by the condensation of 2,3,5-tri-O-(benzyl)-.alpha.-D-arabinofuranosyl chloride [4060-34-8] with 2,4-bis-O-(trimethylsilyl)-5-ethyluracil [10457-14-4] in ClCH₂CH₂Cl in the presence of mol. sieves or SnCl₄, inhibited herpes simplex virus at a concn. as low as 2 ug/mL. The .alpha.-anomer of I was inactive. CD and NMR data are given.
- ST pyrimidine nucleoside prepn virucide
- IT Virucides and Virustats
 (arabinsfuranosylethylpyrimidine nucleosides)
- IT Circular dichroism
 Nuclear magnetic resonance
 (of arabinofuranosylethylpyrimidine nucleosides)
- IT Chromatography, thin-layer
 (of arabinsfuranosylethylpyrimidine nucleosides)
- IT 4060-34-8
 RL: BIOL (Biological study)
 (condensation of, with bis(trimethylsilyl)ethyluracil)
- IT 70051-90-0
 RL: BIOL (Biological study)
 (condensation of, with bis(trimethylsilyl)ethyluracil)
- IT 52492-40-7
 RL: BIOL (Biological study)
 (condensation of, with diethoxyethylpyrimidine)
- IT 34171-35-2
 RL: BIOL (Biological study)
 (condensation of, with tribenzylarabinofuranosyl bromide)
- IT 999-97-3
 RL: BIOL (Biological study)
 (ethyluracil silylation by)
- IT 70020-81-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. and **amination** and hydrolysis of)
- IT 70020-79-0P 70020-80-3P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

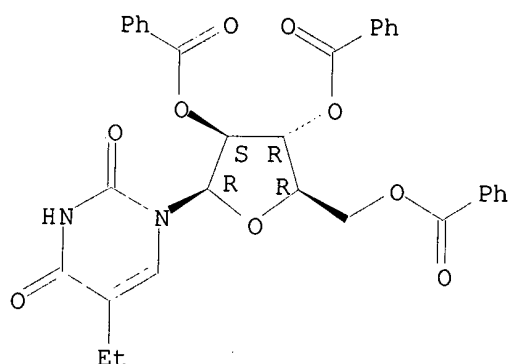
- (Reactant or reagent)
(prepn. and **amination** of)
- IT 10457-14-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and condensation of, with arabinosfuranose- and uracil derivs.)
- IT 70020-77-8P 70020-78-9P
RL: **RCT (Reactant)**; SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(prepn. and reaction with phosphorus pentasulfide)
- IT 70020-76-7P 70020-82-5P
RL: **RCT (Reactant)**; SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(prepn. and redn. of)
- IT 70020-72-3P 70020-73-4P 70020-74-5P 70020-75-6P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. and virucidal activity of)
- IT 4348-68-9
RL: **RCT (Reactant)**; **RACT (Reactant or reagent)**
(reaction of, with bis(trimethylsilyl)ethyluracil)
- IT 4212-49-1
RL: **RCT (Reactant)**; **RACT (Reactant or reagent)**
(silylation of)
- IT 70020-77-8P 70020-78-9P
RL: **RCT (Reactant)**; SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(prepn. and reaction with phosphorus pentasulfide)
- RN 70020-77-8 HCAPLUS
- CN 2,4(1H,3H)-Pyrimidinedione, 5-ethyl-1-(2,3,5-tri-O-benzoyl-.alpha.-D-arabinofuranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



- RN 70020-78-9 HCAPLUS
- CN 2,4(1H,3H)-Pyrimidinedione, 5-ethyl-1-(2,3,5-tri-O-benzoyl-.beta.-D-arabinofuranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



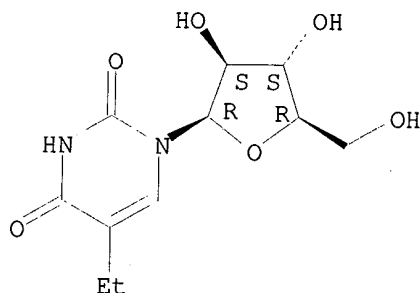
IT 70020-72-3P 70020-73-4P 70020-74-5P
70020-75-6P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. and virucidal activity of)

RN 70020-72-3 HCAPLUS

CN 2,4(1H,3H)-Pyrimidinedione, 1-.beta.-D-arabinofuranosyl-5-ethyl- (9CI)
(CA INDEX NAME)

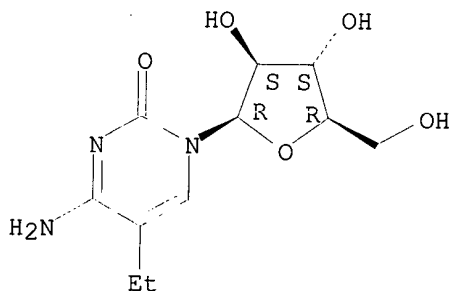
Absolute stereochemistry.



RN 70020-73-4 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-1-.beta.-D-arabinofuranosyl-5-ethyl- (9CI)
(CA INDEX NAME)

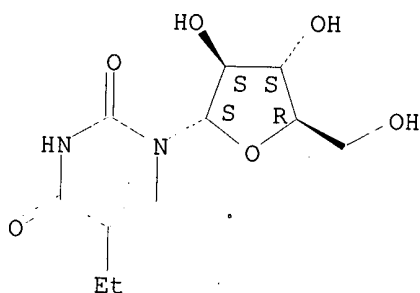
Absolute stereochemistry.



RN 70020-74-5 HCAPLUS

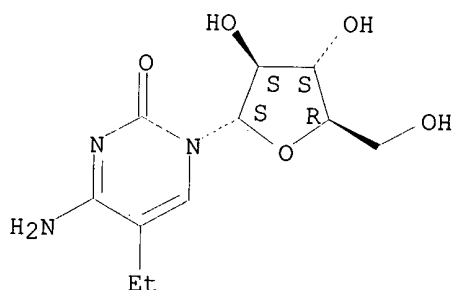
CN 2,4(1H,3H)-Pyrimidinedione, 1-.alpha.-D-arabinofuranosyl-5-ethyl- (9CI)
(CA INDEX NAME)

Absolute stereochemistry.

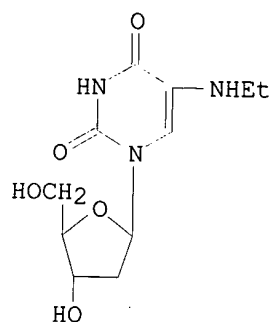


RN 70020-75-6 HCAPLUS
 CN 2(1H)-Pyrimidinone, 4-amino-1-.alpha.-D-arabinofuranosyl-5-ethyl- (9CI)
 (CA INDEX NAME)

Absolute stereochemistry.



L75 ANSWER 26 OF 30 HCAPLUS COPYRIGHT 2003 ACS
 AN 1979:413469 HCAPLUS
 DN 91:13469
 TI Design of species- or isozyme-specific enzyme inhibitors. I. Effect of
 thymidine substituents on affinity for the thymidine site of hamster
 cytoplasmic thymidine kinase
 AU Hampton, Alexander; Kappler, Francis; Chawla, Ram R.
 CS Fox Chase Cancer Cent., Inst. Cancer Res., Philadelphia, PA, 19111, USA
 SO Journal of Medicinal Chemistry (1979), 22(6), 621-31
 CODEN: JMCMAR; ISSN: 0022-2623
 DT Journal
 LA English
 CC 1-3 (Pharmacodynamics)
 Section cross-reference(s): 7, 33
 GI



I

- AB 5-(Ethylamino)-2'-deoxyuridine (I) [5155-07-7] was a very weak inhibitor of hamster thymidine kinase [9002-06-6] and longer-chain 5-(acylamino)-2'-deoxyuridines were weak noncompetitive inhibitors. The above, their phosphates and some of their analogs were synthesized. The concn. dependence of their inhibitory action on the enzyme resembled that of the feedback inhibitor TTP. Enzyme-inhibitor dissocn. consts. (K_i values) were detd. for thymidine derivs. monosubstituted at various positions. There is evidence that attachment of suitable substituents to thymidine could, in principle, lead to thymidine site directed isoenzyme-specific inhibitors of human cytoplasmic thymidine kinase, which is a candidate target in the design of antineoplastic drugs.
- ST deoxyuridine deriv thymidine kinase inhibitor
- IT Kinetics, enzymic
(of inhibition, of thymidine kinase)
- IT 16357-59-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(acylation by, of nucleosides)
- IT 5536-30-1 25152-20-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(acylation of, by (ethoxycarbonyl)ethoxydihydroquinoline)
- IT 9002-06-6
RL: PROC (Process)
(inhibition of, by deoxythymidines and deoxyuridines)
- IT 70465-57-5P 70465-58-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and conversion triphosphate)
- IT 70465-91-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and isolation of)
- IT 5155-07-7P 5536-30-1P 7236-56-8P 21473-40-5P 21888-81-3P
26639-00-9P 52450-18-7P 63614-47-1P 70465-51-9P 70465-52-0P
70465-53-1P 70465-54-2P 70465-55-3P 70465-56-4P 70465-59-7P
70465-60-0P **70465-61-1P** 70465-62-2P 70465-63-3P
70465-64-4P 70465-65-5P 70465-66-6P 70465-67-7P 70465-68-8P
70465-69-9P 70465-70-2P 70465-72-4P 70465-73-5P 70465-74-6P
70465-75-7P 70465-76-8P 70465-77-9P 70465-78-0P 70465-79-1P
70465-80-4P 70465-81-5P 70465-82-6P 70465-83-7P 70465-84-8P
70465-85-9P 70465-86-0P 70575-53-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and thymidine kinase-inhibiting activity of)
- IT 70465-71-3P 70465-87-1P 70465-88-2P 70465-89-3P 70465-90-6P
70465-92-8P 70491-64-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
- IT 7253-19-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with alkylamines)

IT 1763-02-6
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with **amines**)

IT 54-42-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with **amines** and with potassium cyanate)

IT 70465-93-9
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with ethanethiol)

IT 64966-96-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with ethylamine)

IT 110-70-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with tosylthymidine)

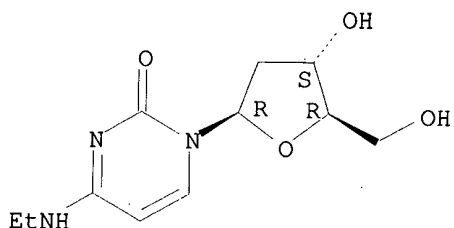
IT 53435-03-3 53495-39-9 70465-94-0
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
 (thymidine kinase-inhibiting activity of)

IT 70465-61-1P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and thymidine kinase-inhibiting activity of)

RN 70465-61-1 HCAPLUS

CN Cytidine, 2'-deoxy-N-ethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

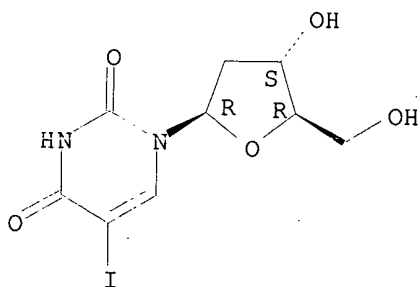


IT 54-42-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with **amines** and with potassium cyanate)

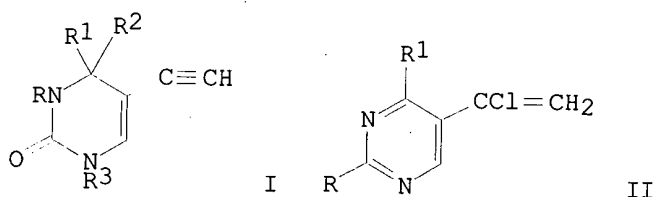
RN 54-42-2 HCAPLUS

CN Uridine, 2'-deoxy-5-iodo- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



TI The synthesis of nucleosides derived from 5-ethynyluracil and 5-ethynylcytosine
 AU Barr, Philip J.; Jones, A. Stanley; Serafinowski, Pawel; Walker, Richard T.
 CS Chem. Dep., Univ. Birmingham, Birmingham, UK
 SO Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1978), (10), 1263-7
 CODEN: JCPRB4; ISSN: 0300-922X
 DT Journal
 LA English
 CC 33-7 (Carbohydrates)
 GI

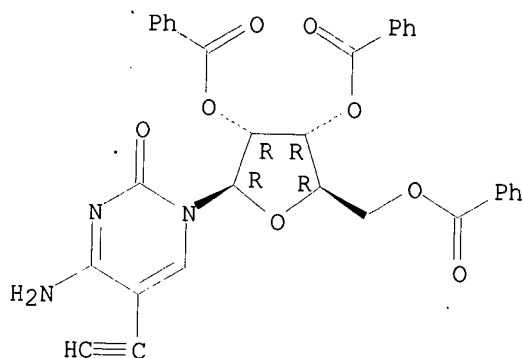


AB 5-Ethynyluridine, 2'-deoxy-5-ethynyluridine, and its .alpha.-anomer (I; R = H, R1R2 = O, R3 = .beta.-D-ribofuranosyl, 2-deoxy-.beta.-D-erythro-pentofuranosyl, -.alpha.-D-erythro-pentofuranosyl, resp.) were prepd. by condensation of the trimethylsilyl deriv. of 5-ethynyluracil (I; R = R3 = H, R1R2 = O) with the appropriate blocked sugar derivs. and removal of the blocking groups. Treatment of the pyrimidine II (R = R1 = Cl) with NH3 gave a mixt. of II [R = NH2, R1 = Cl; R = Cl, R1 = NH2 (III)]; treatment of III with KOH in aq. dioxane gave 5-ethynylcytosine (I; RR1 = bond, R2 = NH2, R3 = H) (IV). Condensation of the trimethylsilyl deriv. of IV with the appropriate protected sugar derivs. and removal of the protecting groups gave 5-ethynylcytidine, 2'-deoxy-5-ethynylcytidine, and its .alpha.-anomer (I; RR1 = bond, R2 = NH2, R3 = .beta.-D-ribofuranosyl, 2-deoxy-.beta.-D-erythro-pentofuranosyl, -.alpha.-D-erythro-pentofuranosyl, resp.).

ST uridine ethynyl; cytosine ethynyl; cytidine ethynyl; ethynyl nucleoside
 IT Nucleosides, preparation
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, from ethynyluracil and -cytosine)
 IT 61751-45-9
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (amination of)
 IT 4330-21-6 6974-32-9
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (condensation reaction of, with bis(trimethylsilyl) deriv. of ethynyluracil)
 IT 69075-40-7P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. and condensation reaction of, with acetyltribenzoylribofuranose and chlorodeoxyditoluoylpentofuranose)
 IT 65223-79-2P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and conversion of, to etynylcytidine)
 IT 65223-81-6P 69075-41-8P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. and debenzoylation of)
 IT 69075-43-0P 69075-44-1P 69075-45-2P
 69075-46-3P

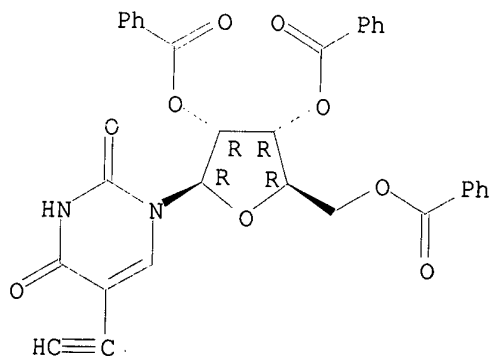
- RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and detoluoylation of)
- IT 65223-77-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
- IT 65223-78-1P 69075-47-4P 69275-22-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, from ethynylcytosine)
- IT 61135-33-9P 69075-42-9P 69101-77-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, from ethynyluracil)
- IT 65223-82-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn., oxidn., and dehydrochlorination of)
- IT 59989-18-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(trimethylsilylation of)
- IT 65223-81-6P 69075-41-8P
RL: **RCT (Reactant)**; SPN (Synthetic preparation); PREP
(Preparation); **RACT (Reactant or reagent)**
(prepn. and debenzoylation of)
- RN 65223-81-6 HCAPLUS
- CN Cytidine, 5-ethynyl-, 2',3',5'-tribenzoate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



- RN 69075-41-8 HCAPLUS
- CN Uridine, 5-ethynyl-, 2',3',5'-tribenzoate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



- IT 69075-43-0P 69075-44-1P 69075-45-2P

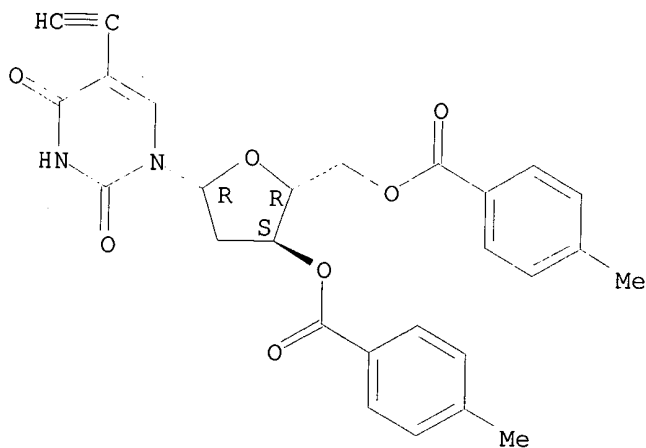
69075-46-3P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and detoluoylation of)

RN 69075-43-0 HCAPLUS

CN Uridine, 2'-deoxy-5-ethynyl-, 3',5'-bis(4-methylbenzoate) (9CI) (CA INDEX NAME)

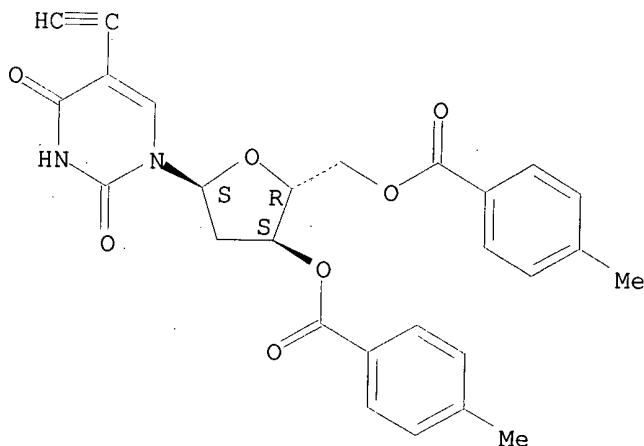
Absolute stereochemistry.



RN 69075-44-1 HCAPLUS

CN 2,4(1H,3H)-Pyrimidinedione, 1-[2-deoxy-3,5-bis-O-(4-methylbenzoyl)-.alpha.-D-erythro-pentofuranosyl]-5-ethynyl- (9CI) (CA INDEX NAME)

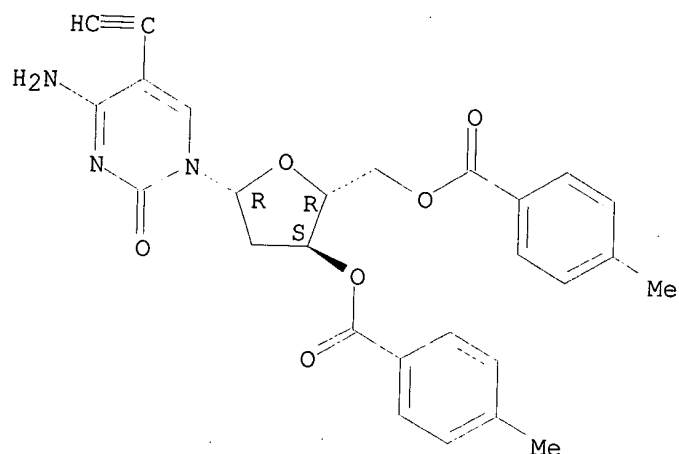
Absolute stereochemistry.



RN 69075-45-2 HCAPLUS

CN Cytidine, 2'-deoxy-5-ethynyl-, 3',5'-bis(4-methylbenzoate) (9CI) (CA INDEX NAME)

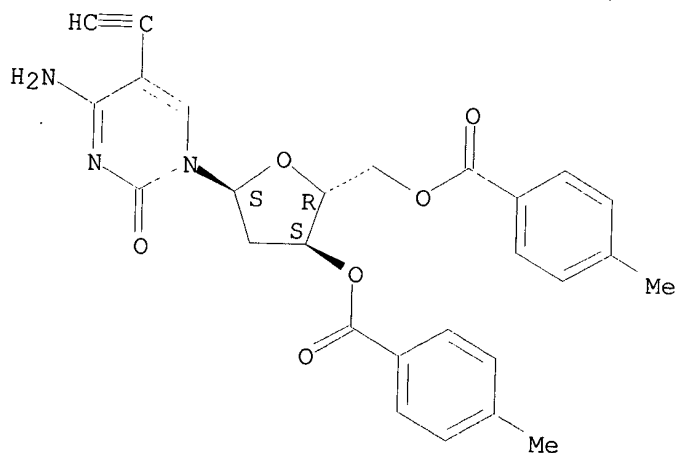
Absolute stereochemistry.



RN 69075-46-3 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-1-[2-deoxy-3,5-bis-O-(4-methylbenzoyl)-.alpha.-D-erythro-pentofuranosyl]-5-ethynyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



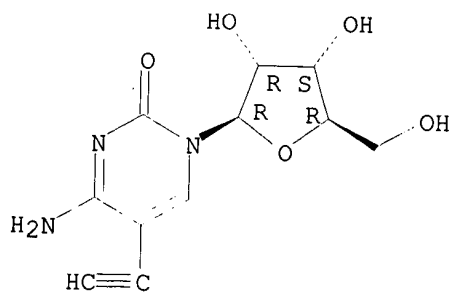
IT 65223-78-1P 69075-47-4P 69275-22-5P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, from ethynylcytosine)

RN 65223-78-1 HCAPLUS

CN Cytidine, 5-ethynyl- (9CI) (CA INDEX NAME)

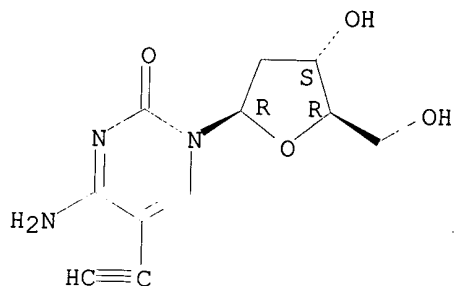
Absolute stereochemistry.



RN 69075-47-4 HCAPLUS

CN Cytidine, 2'-deoxy-5-ethynyl- (9CI) (CA INDEX NAME)

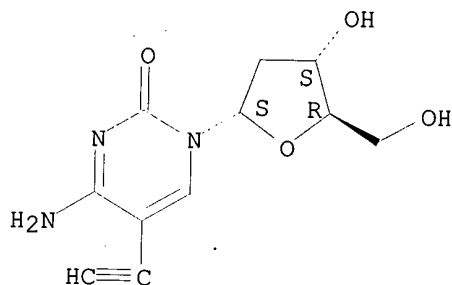
Absolute stereochemistry.



RN 69275-22-5 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-1-(2-deoxy-.alpha.-D-erythro-pentofuranosyl)-5-ethynyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



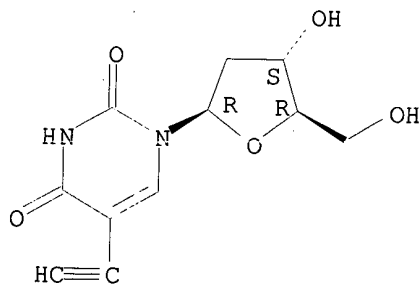
IT 61135-33-9P 69075-42-9P 69101-77-5P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, from ethynyluracil)

RN 61135-33-9 HCAPLUS

CN Uridine, 2'-deoxy-5-ethynyl- (9CI) (CA INDEX NAME)

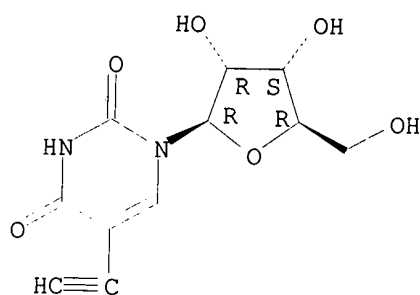
Absolute stereochemistry.



RN 69075-42-9 HCAPLUS

CN Uridine, 5-ethynyl- (9CI) (CA INDEX NAME)

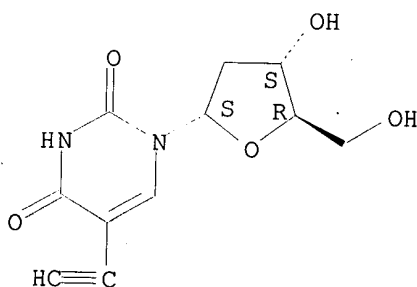
Absolute stereochemistry.



RN 69101-77-5 HCAPLUS

CN 2,4(1H,3H)-Pyrimidinedione, 1-(2-deoxy-α-D-erythro-pentofuranosyl)-5-ethynyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



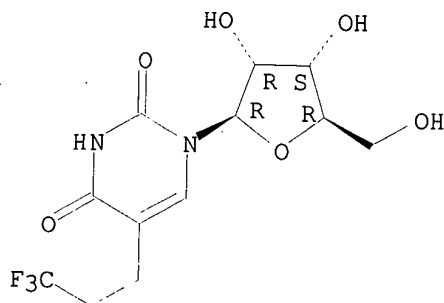
L75 ANSWER 28 OF 30 HCAPLUS COPYRIGHT 2003 ACS
 AN 1977:106946 HCAPLUS
 DN 86:106946
 TI Transformation of 5-(polyfluoroalkyl)- and 5-(polyfluoroalkoxymethyl)uridines
 AU Mel'nik, S. Ya.; Bakhmedova, A. A.; Sof'in, A. V.; Vornovitskaya, G.I.; Dubinina, I. G.; Preobrazhenskaya, M. N.
 CS Cancer Res. Cent., Moscow, USSR
 SO Bioorganicheskaya Khimiya (1976), 2(11), 1520-5
 CODEN: BIKHD7; ISSN: 0132-3423
 DT Journal
 LA Russian
 CC 33-7 (Carbohydrates)
 Section cross-reference(s): 28
 GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Cyclization of 5-(3,3,3-trifluoropropyl)uridine by (PhO)₂CO gave 56% 2,2'-anhydro deriv. which was cleaved by base to give 76% I (R = H, X = O). The latter was acetylated and treated with P2S5 to give 88% I (R = Ac, X = S) which was **aminated** to give 57% II. Acetylation of III (R = H, X = O) followed by treatment with P2S5 gave 52.3% III (R = Ac, X = S) which was **aminated** to give 71.4% IV. I (R = H, X = O), III (R = H, X = O), and 5-(3,3,3-trifluoroethoxymethyl)uridine had no effect on uridinekinase, UMP-, and Udp-kinases in enzyme systems

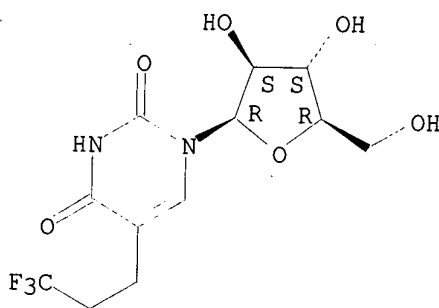
- phosphorylating uridine to UMP or UMP to UTP.
- ST uridine polyfluoroalkyl; fluoroalkoxyuridine; polyfluoroalkoxymethyl uridine
- IT 102-09-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclization of trifluoropropyluridine by)
- IT 55420-09-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclization of, by diphenyl carbonate)
- IT 9026-39-5 9026-51-1 9036-23-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(effect of polyfluoroalkyl- and polyfluoroalkoxymethyluridines on)
- IT 62012-59-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and acetylation of)
- IT 59694-34-7P 59727-26-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and effect on uridine kinase)
- IT 62012-61-7P 62012-63-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction with ammonia)
- IT 59694-33-6P 62012-60-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction with phosphorus pentasulfide)
- IT 62042-31-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and ring cleavage of)
- IT 62012-62-8P 62012-64-0P 62012-65-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
- IT 55420-09-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclization of, by diphenyl carbonate)
- RN 55420-09-2 HCAPLUS
- CN Uridine, 5-(3,3,3-trifluoropropyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



- IT 62012-59-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and acetylation of)
- RN 62012-59-3 HCAPLUS
- CN 2,4(1H,3H)-Pyrimidinedione, 1-.beta.-D-arabinofuranosyl-5-(3,3,3-trifluoropropyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



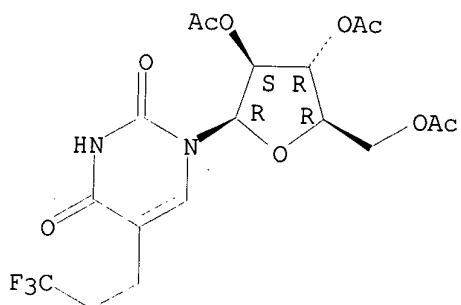
IT 62012-60-6P

RL: **RCT (Reactant)**; SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)** (prepn. and reaction with phosphorus pentasulfide)

RN 62012-60-6 HCAPLUS

CN 2,4(1H,3H)-Pyrimidinedione, 1-(2,3,5-tri-O-acetyl-.beta.-D-arabinofuranosyl)-1-(3,3,3-trifluoropropyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



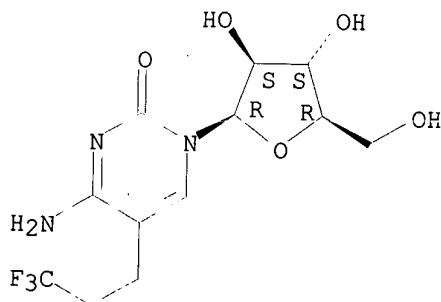
IT 62012-62-8P

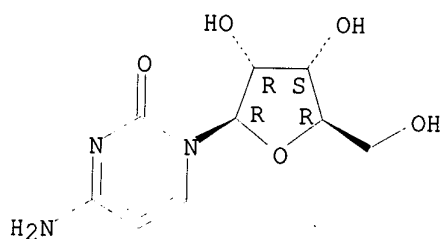
RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)

RN 62012-62-8 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-1-.beta.-D-arabinofuranosyl-5-(3,3,3-trifluoropropyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

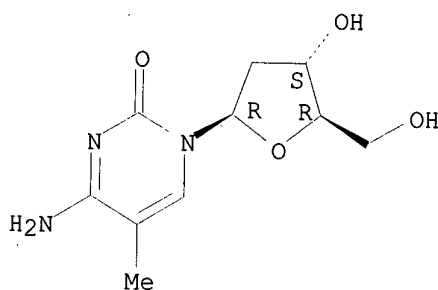




RN 5241-10-1 HCAPLUS

CN Cytidine, 2'-deoxy-5-methyl-, monohydrochloride (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

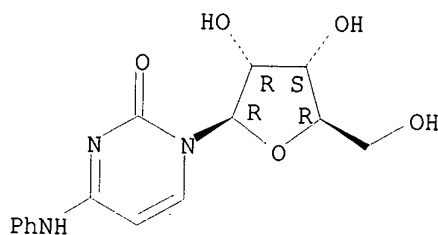


● HCl

RN 18839-89-9 HCAPLUS

CN Cytidine, N-phenyl- (8CI, 9CI) (CA INDEX NAME)

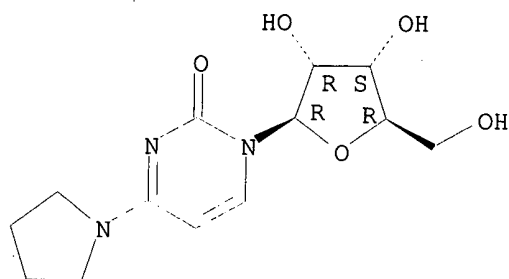
Absolute stereochemistry.



RN 29834-86-4 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-(1-pyrrolidinyl)-1-.beta.-D-ribofuranosyl- (8CI, 9CI) (CA INDEX NAME)

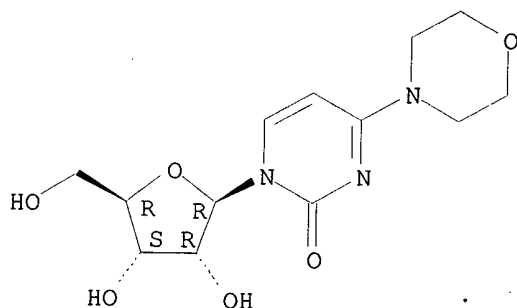
Absolute stereochemistry.



RN 39824-59-4 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-(4-morpholinyl)-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



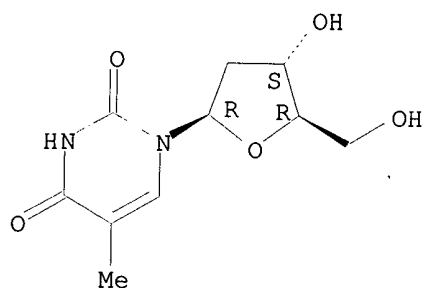
IT 50-89-5, reactions 58-96-8

RL: RCT (Reactant); RACT (Reactant or reagent)
(silylation and amination of)

RN 50-89-5 HCAPLUS

CN Thymidine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



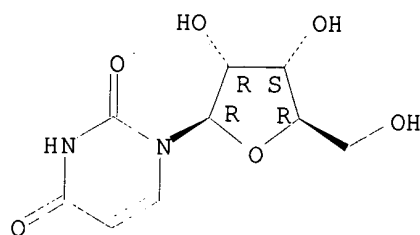
RN 58-96-8 HCAPLUS

CN Uridine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

DN 83:97822
TI Syntheses of nucleosides. XIV. **Amination** of heterocycles. I.
New simple synthesis of cytidines
AU Vorbrueggen, Helmut; Krolikiewicz, Konrad; Niedballa, Ulrich
CS Forschungslab., Schering A.-G., Berlin, Fed. Rep. Ger.
SO Justus Liebig's Annalen der Chemie (1975), (5), 988-1002
CODEN: JLCBF; ISSN: 0075-4617
DT Journal
LA German
CC 33-7 (Carbohydrates)
AB Cytidines were prepd. by persilylation of free or acetylated uridines or uridine 5'-phosphates of the OH groups of the sugar moiety and the phosphate group followed by treatment with NH₃ or primary or secondary **amines**. Thus, uridine reacted with (Me₃Si)₂NH and NH₃ in an autoclave for 0.5 hr at 24.degree. and 16 atm and 48 hr at 162.degree. and 26 atm to give 72.5% cytidine.
ST silylation **amination** uridine phosphate; cytidylic acid analog; cytosine deoxyribofuranosyl; cytidine; phenethylcytosine deoxyribofuranosyl; phenylcytidine deoxyribofuranosyl; azauridine pyrrolidinoribofuranosyl; thymidine **amination**
IT 75-12-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(**amination** of silylated nucleosides with)
IT 62-53-3, reactions 64-04-0 100-46-9 108-00-9 110-91-8 123-75-1
7664-41-7, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(**amination** of silylated uridines with)
IT 65-46-3P 5241-10-1P 18839-89-9P
29834-86-4P 34948-48-6P 35003-10-2P 39824-59-4P
56982-72-0P 56982-73-1P 56982-74-2P 56982-75-3P 56982-77-5P
56982-78-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
IT 57025-16-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with ribose derivs.)
IT 5991-01-5 6974-32-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with silylated triazines)
IT 50-89-5, reactions 54-25-1 58-96-8 1627-29-8
3387-36-8 56982-76-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(silylation and **amination** of)
IT 999-97-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(silylation of uridine derivs. with)
IT 65-46-3P 5241-10-1P 18839-89-9P
29834-86-4P 39824-59-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 65-46-3 HCAPLUS
CN Cytidine (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



- L75 ANSWER 30 OF 30 HCAPLUS COPYRIGHT 2003 ACS
 AN 1974:421580 HCAPLUS
 DN 81:21580
 TI 5-Alkylpyrimidine nucleosides. Preparation and properties of
 5-ethyl-2'-deoxycytidine and related nucleosides
 AU Kulikowski, T.; Shugar, D.
 CS Inst. Biochem. Biophys., Acad. Sci., Warsaw, Pol.
 SO Journal of Medicinal Chemistry (1974), 17(3), 269-73
 CODEN: JMCMAR; ISSN: 0022-2623
 DT Journal
 LA English
 CC 3-2 (Biochemical Interactions)
 Section cross-reference(s): 33
 AB 5-Ethyl-2'-deoxycytidine (I) [50356-36-0] and its anomer
 1-(2-deoxy-.alpha.-D-ribofuranosyl)-5-ethylcytosine (II) [50499-40-6] were prepd. by thiation of .alpha.,.beta.-1-(3,5-di-O-p-chlorobenzoyl-2-D-ribofuranosyl)-5-ethyluracil with P2S5, thin-layer chromatog. sepn. of anomers, deblocking by treatment with NaOMe, and amination with NH3-MeOH. I had significant activity against herpes simplex virus, while 5'-phosphate esters of both I and II were dephosphorylated at comparable rates by snake venom 5'-nucleotidase [9027-73-0].
 ST cytidine ethyl deoxy antiviral; nucleotide dephosphorylation nucleotidase; nucleoside cytidine antiviral
 IT Dephosphorylation, biological
 (by nucleotidase, of ethyldeoxycytidine phosphate)
 IT Virus, animal
 (herpes simplex, ethyldeoxycytidine inhibition of)
 IT Circular dichroism
 (of 5-ethyl-2'-deoxynucleosides, conformation in relation to)
 IT Chromatography, thin-layer
 (of 5-ethylpyrimidine 2'-deoxynucleosides, stereoisomer sepn. by)
 IT 9001-78-9 9027-73-0
 RL: PRP (Properties)
 (deoxycytidine 5'-phosphate dephosphorylation by)
 IT 52239-74-4 52239-75-5
 RL: PRP (Properties)
 (dephosphorylation of)
 IT 50356-36-0P 50499-40-6P
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
 (prepn. and antiviral activity of)
 IT 52239-69-7P 52239-70-0P 52239-71-1P 52239-72-2P
 52239-73-3P 52365-58-9P 52365-59-0P
 RL: PREP (Preparation)
 (prepn. of)
 IT 75-77-4 52304-86-6
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with cytosine deriv.)

IT 25137-84-2 25253-75-2

RL: RCT (Reactant); RACT (Reactant or reagent)
(thiation of)

IT 32550-24-6

RL: RCT (Reactant); RACT (Reactant or reagent)
(trimethylsilylation of)

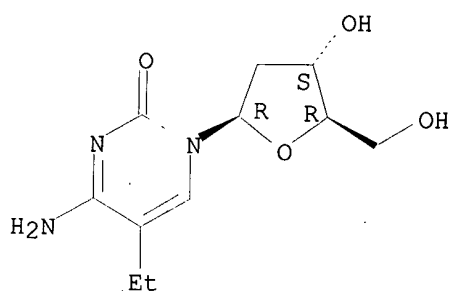
IT 50356-36-0P 50499-40-6P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(prepn. and antiviral activity of)

RN 50356-36-0 HCAPLUS

CN Cytidine, 2'-deoxy-5-ethyl- (9CI) (CA INDEX NAME)

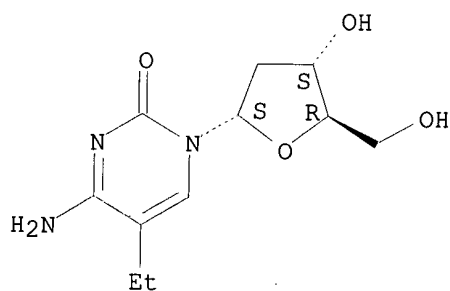
Absolute stereochemistry.



RN 50499-40-6 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-1-(2-deoxy-α-D-erythro-pentofuranosyl)-5-ethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



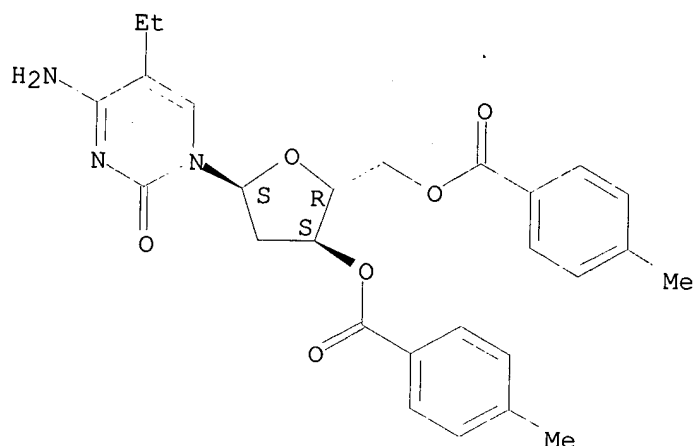
IT 52239-72-2P 52239-73-3P

RL: PREP (Preparation)
(prepn. of)

RN 52239-72-2 HCAPLUS

CN 2(1H)-Pyrimidinone, 4-amino-1-[2-deoxy-3,5-bis-O-(4-methylbenzoyl)-α-D-erythro-pentofuranosyl]-5-ethyl- (9CI) (CA INDEX NAME)

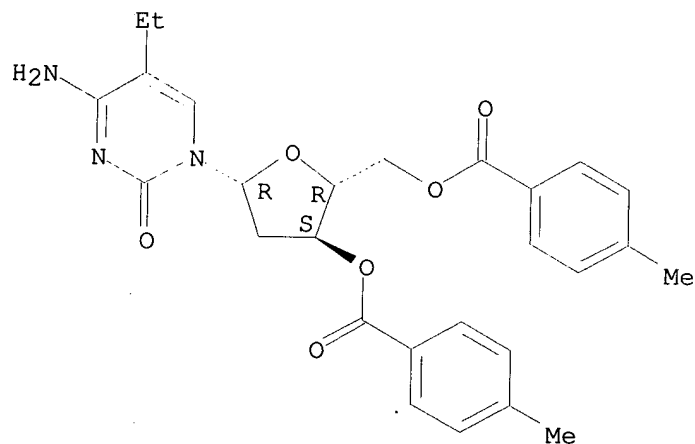
Absolute stereochemistry.



RN 52239-73-3 HCAPLUS

CN Cytidine, 2'-deoxy-5-ethyl-, 3',5'-bis(4-methylbenzoate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



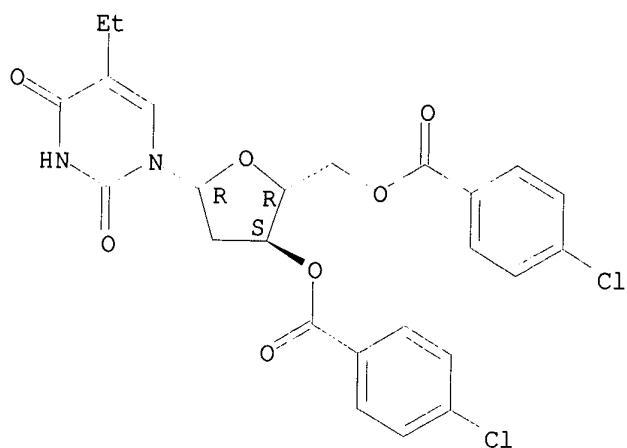
IT 25137-84-2 25253-75-2

RL: RCT (Reactant); RACT (Reactant or reagent)
(thiation of)

RN 25137-84-2 HCAPLUS

CN Uridine, 2'-deoxy-5-ethyl-, 3',5'-bis(4-chlorobenzoate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 25253-75-2 HCAPLUS

CN 2,4(1H,3H)-Pyrimidinedione, 1-[3,5-bis-O-(4-chlorobenzoyl)-2-deoxy-.alpha.-D-erythro-pentofuranosyl]-5-ethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

